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THE

# Desert

M A G A Z I N E



JULY, 1942

25 CENTS



## *Saguaro Cactus*

By S. PAUL LINDAU  
Los Angeles, California

This unusual shot of the upper branches of a saguaro cactus is winner of first prize in Desert Magazine's monthly photographic contest. Taken with an Ikonta A camera, Tessar 3.5 lens. Super XX film, 1T2 yellow filter; 1/100 at F20.

## *Special Merit*

The following photos were judged to have special merit:

"Chief Turkey Foot," by Ted Jerome, Las Vegas, Nevada.

"Lizard Eye View of Yucca," by Joe Orr, Los Angeles, California.

"Death Valley," by Fred H. Ragsdale, Los Angeles, California.

## *Death Valley Sand Dunes*

By W. G. MARTIN  
Huntington Park, Calif.

Winner of second prize in the May amateur contest was taken with a Korelle Reflex camera 2 1/4 x 2 1/4. Zeiss Tessar lens; F8, 1/25 sec. Agra-Finopan film, 23A filter.





## DESERT Calendar

- JULY 1-4 Annual fiesta and rodeo, Mescalero Apache Indian reservation, New Mexico.
- 1-6 12th Annual Hopi Craftsman exhibition, Museum of Northern Arizona, Flagstaff. Indian weavers, potters, silversmiths at work.
- 1-12 Arizona Baptist summer assembly, Episcopal conference grounds, Prescott. Rev. Charles L. Kau, Phoenix, dean.
- 2-4 Rodeo and Stock Show, Grants, New Mexico.
- 2-4 Rodeo, McGaffey, New Mexico.
- 2-5 55th Annual Frontier Days Celebration, Prescott, Arizona. Bruno Rezzonico, chairman.
- 3-4 Annual rodeo, Estancia, New Mexico. Milton Berkshire, chairman.
- 3-4 Annual rodeo, Silver City, N. M.
- 3-4 Annual Rodeo, Fort Sumner, New Mexico. Forrest Delk, chairman.
- 3-5 All Indian Pow-Wow, Flagstaff, Arizona.
- 4 Rodeo at Cimarron, New Mexico.
- 4 Annual Rodeo and Celebration, Ruidoso, New Mexico.
- 7-22 Drawings by Maynard Owen Dixon, depicting Arizona from 1900 to 1941, Museum of Northern Arizona, Flagstaff.
- 11-12 League of Western Writers conference, Provo, Utah.
- 11-AUG. 13 15th annual anthropological field session of University of New Mexico, at Chaco canyon. Dr. Paul Reiter, director. Followed by 5th annual Southwestern anthropological conference at the canyon.
- 14 Annual fiesta and Corn dance, Cochiti Indian Pueblo, N. M.
- 15 Moriarty Fiesta, Moriarty, New Mexico.
- 18 Annual Timpanogos hike starts from Aspen Grove, near summit of Mt. Timpanogos, Utah.
- 19 Punta de Agua fiesta, Willard, New Mexico.
- 21-24 Utah Pioneer Days, Ogden. Harmon W. Peery, chairman.
- 21-25 Utah Covered Wagon Days, Salt Lake City. B. A. Reynolds, chairman.
- 22-AUG. 2 Navajo Crafts, a contemporary exhibit presented by the Navajo Guilds at Museum of Northern Arizona, Flagstaff.
- 25-26 St. James and St. Ann fiesta, Taos, New Mexico.
- 26 Annual fiesta and dance, Santa Ana Indian Pueblo, N. M.
- 31-AUG. 2 Flagstaff Charity Horse show—"Glorifying the Western Horse." Leo Weaver, secretary.



Volume 5

JULY, 1942

Number 9

<b>COVER</b>	"Chuckawalla," photo by Joe Orr, Los Angeles, Calif.	
<b>PHOTOGRAPHY</b>	Prize winning pictures in May . . . . .	2
<b>CALENDAR</b>	Current events on the desert . . . . .	3
<b>LANDMARK</b>	Elephant Rock, by THEODORE JEROME . . . . .	4
<b>WEATHER</b>	May temperatures on the Desert . . . . .	4
<b>ADVENTURE</b>	Mission to Ch'ool'i'i By RICHARD VAN VALKENBERGH . . . . .	5
<b>MINERALOGY</b>	Visitor From a Distant Planet By H. H. NININGER . . . . .	9
<b>ADVENTURE</b>	Gold Hunters Are Like That! By CHARLES KELLY . . . . .	13
<b>DESERT QUIZ</b>	A test of your desert knowledge . . . . .	15
<b>PHILOSOPHY</b>	'Beauty is not in faces, But in the hearts of men' By PHIL K. STEPHENS . . . . .	16
<b>ART OF LIVING</b>	Desert Refuge, by MARSHAL SOUTH . . . . .	18
<b>DRAMA</b>	When Hollywood Comes to the Desert By ETHEL S. CAPPS . . . . .	20
<b>HOBBY</b>	Rattlesnake Skins are My Hobby By HELEN PRATT . . . . .	24
<b>CONTRIBUTORS</b>	Writers of the Desert . . . . .	26
<b>NEWS</b>	Here and There on the Desert . . . . .	27
<b>CONTEST</b>	Prize contest announcement . . . . .	29
<b>BOOKS</b>	"Sun Chief," and other reviews . . . . .	30
<b>HOBBY</b>	Gems and Minerals —Edited by ARTHUR L. EATON . . . . .	31
<b>MINING</b>	Briefs from the desert region . . . . .	35
<b>LETTERS</b>	Comment from Desert Magazine readers . . . . .	36
<b>PHOTO CONTEST</b>	Announcement for July . . . . .	37
<b>COMMENT</b>	Just Between You and Me, by the Editor . . . . .	38
<b>POETRY</b>	"Desert Silversmith," and other poems . . . . .	39

The Desert Magazine is published monthly by the Desert Publishing Company, 636 State Street, El Centro, California. Entered as second class matter October 11, 1937, at the post office at El Centro, California, under the Act of March 3, 1879. Title registered No. 358865 in U. S. Patent Office, and contents copyrighted 1942 by the Desert Publishing Company. Permission to reproduce contents must be secured from the editor in writing.

RANDALL HENDERSON, Editor.

LUCILE HARRIS, Associate Editor.

Manuscripts and photographs submitted must be accompanied by full return postage. The Desert Magazine assumes no responsibility for damage or loss of manuscripts or photographs although due care will be exercised for their safety. Subscribers should send notice of change of address to the circulation department by the fifth of the month preceding issue.

### SUBSCRIPTION RATES

One year, including gold-embossed loose leaf binder . . . . . \$3.00  
Two years, including binders for both years . . . . . 5.00

You may deduct 50c each for binders if not desired.  
Canadian subscriptions 25c extra, foreign 50c extra.

Address correspondence to Desert Magazine, 636 State St., El Centro, California.

## ELEPHANT ROCK

Winner of Desert Magazine's May Landmark contest is Theodore Jerome of Las Vegas, Nevada. He identified the accompanying picture as Elephant Rock in the Valley of Fire near Overton. His story of this unusual rock formation and the directions for reaching it are given on this page.



By THEODORE JEROME

**F**REAK rocks in Nevada are as common as boulders on a Vermont farm. The one pictured in Desert Magazine's May Landmark Contest is known as Elephant Rock, located just 50 miles from Main and Fremont streets in Las Vegas, in the Valley of Fire which is under supervision of the national park service.

If you would "See the Elephant," go northeast from Las Vegas on Highway 91 and 93, thirty-three miles to Crystal and turn right on to the dirt road. This is the most dramatic route into the valley because about 15 miles from Crystal one makes a turn between canyon walls of igneous rock to come suddenly upon a great panorama of tortured sand-stone blazing red beneath the desert sun.

Two miles from this turn, Elephant Rock juts up a few yards off the highway to the right. The "elephant" part of the rock is, speaking architecturally, a flying buttress simulating from a distance the head and trunk of a giant red pachyderm. The head faces across the valley toward Atlatl rock, upon which ancient residents of the desert cut an amazing gallery of petroglyphs.

The elephant arch is 11 feet high with an inside span of nine feet and an average circumference of the trunk of about eight feet. The main rock is 46 feet high and 220 feet in girth. The observing visitor will note that the cut in Desert Magazine

was made from a photographic print on which the negative had been reversed.

About two miles farther along is the branch road leading to Mouse Tanks. These are pits and crevices in the rock where the renegade Indian, Mouse, hid from the posses sent to apprehend him for his many crimes. (Desert Magazine, November 1939.)

Elephant Rock is readily recognized upon approach from either direction, but it has other animal features of equal interest. Viewing it from a southwesterly angle under early afternoon light it presents an excellent lion's head with wide opened jaw and upon the top of the main rock is a horizontal slab about four and one-half feet long which is a quite perfect horse's skull, neck and foreshortened body; even the lower front teeth are represented.

Rats, birds and lizards make their homes in the crevices of Elephant Rock and the bedding place of a fox or coyote was seen at a vantage point part way up one side. Lichens of many colors abound, running the gamut of yellows, browns and through grey, heliotrope and black. These lichens give evidence that the rock, although apparently eroding away, has been preserved in its present general aspect for many centuries.

It is an interesting thought that the ancient peoples who lived in this valley, and left behind so many of their artistic endeavors, never knew of the strange animal which this landmark resembles.

## GOVERNMENT TO GROW TEST PLOTS OF GUAYULE

One hundred experimental plots of guayule are to be planted at various points in the Southwest this season as the initial step in a program to determine where and under what conditions this rubber-producing plant will grow most favorably.

Plantings are under the direction of W. G. McGinnis of the Southwest forest district. The locations are widely scattered, extending from the Pacific coast to Texas, and from the Mexican border to Utah. At Salinas, California, 500,000,000 seedlings are being grown for the plantings.

## Weather

FROM PHOENIX BUREAU

Temperatures—	Degrees
Mean for month .....	75.2
Normal for May .....	75.0
Highest in May on 21st .....	106.0
Lowest in May on 13th .....	48.0
Rainfall—	Inches
Total for May .....	0.00
Average for May .....	.12
Weather—	
Days clear .....	24
Days partly cloudy .....	7
Days cloudy .....	0
Sunshine 99 percent of possible time.	



To Live in . . .

## ALBUQUERQUE

Albuquerque is a beautiful city, clean and bright and well-regulated, with the finest living, educational, and shopping facilities.

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Richard Van Valkenbergh had heard the Navajo legend of the White Shell Woman, and he wanted to know the location of the sacred mountain where she was born. But before Bead Singer, the medicine man, would reveal this information it was necessary that Van conclude a mysterious mission for his old Indian friend. And here is the amazing story of that mission.

## Mission to *Ch'ool'i'i*

By RICHARD VAN VALKENBERGH

TWO red coals gleamed in the ashes of the medicine hogan like the eyes of *Gini*, the night hawk. The pallid breath of early dawn crept through the smoke-hole as my friend, *Hatbli Yo'ii*, the Bead Singer, finished his story of the nativity of the Navajo goddess, *Yo'o lakaih asdzan*, the White Shell Woman.

A few hours later, after the last songs of *do'iigash*, the all night sing, were finished, Bead Singer and I rode toward the mountain. He was too silent, and I was apprehensive. Had I unwittingly stumbled on a taboo subject when I asked him to tell me the location of *Ch'ool'i'i*, the sacred mountain where the White Shell Woman was born?

Our broomtails blew as we breasted the slick sandstone vertebra of Rainy mountain. Shown on maps as Cibola Mesa this narrow tableland rises like a great dyke to sever for 50 miles the Largo and Blanco canyons. Veering away from us in a green and grey mosaic the old Navajo country of northern New Mexico swelled upward and faded into the San Juan mountains in southern Colorado.

I followed the old Indian's eyes as they searched across the vast terrain. Suddenly they fixed. He spoke, "My son! Look sharply through the fork of the redbud bush before you. Do you see the cone setting on the edge of a stepped mountain which rises like a turquoise against the shell-colored clouds?"

In a moment I located the cone. It seemed no larger than a golf tee. While I was orientating it to known landmarks the Bead Singer took a small deerhide pouch out of his medicine bundle. Handing it to me he said, "Fill this with earth from the part of the mountain that touches the sky. Then you will have the right to know of *Ch'ool'i'i*, the Lone Spruce mountain."

My general knowledge of San Juan and Rio Arriba counties told me that not even a wagon track ran toward the mountain from Rainy Ridge. Road maps made it definite that the approach would have to be made from the north, off the road that runs between Blanco and Dulce, New Mexico

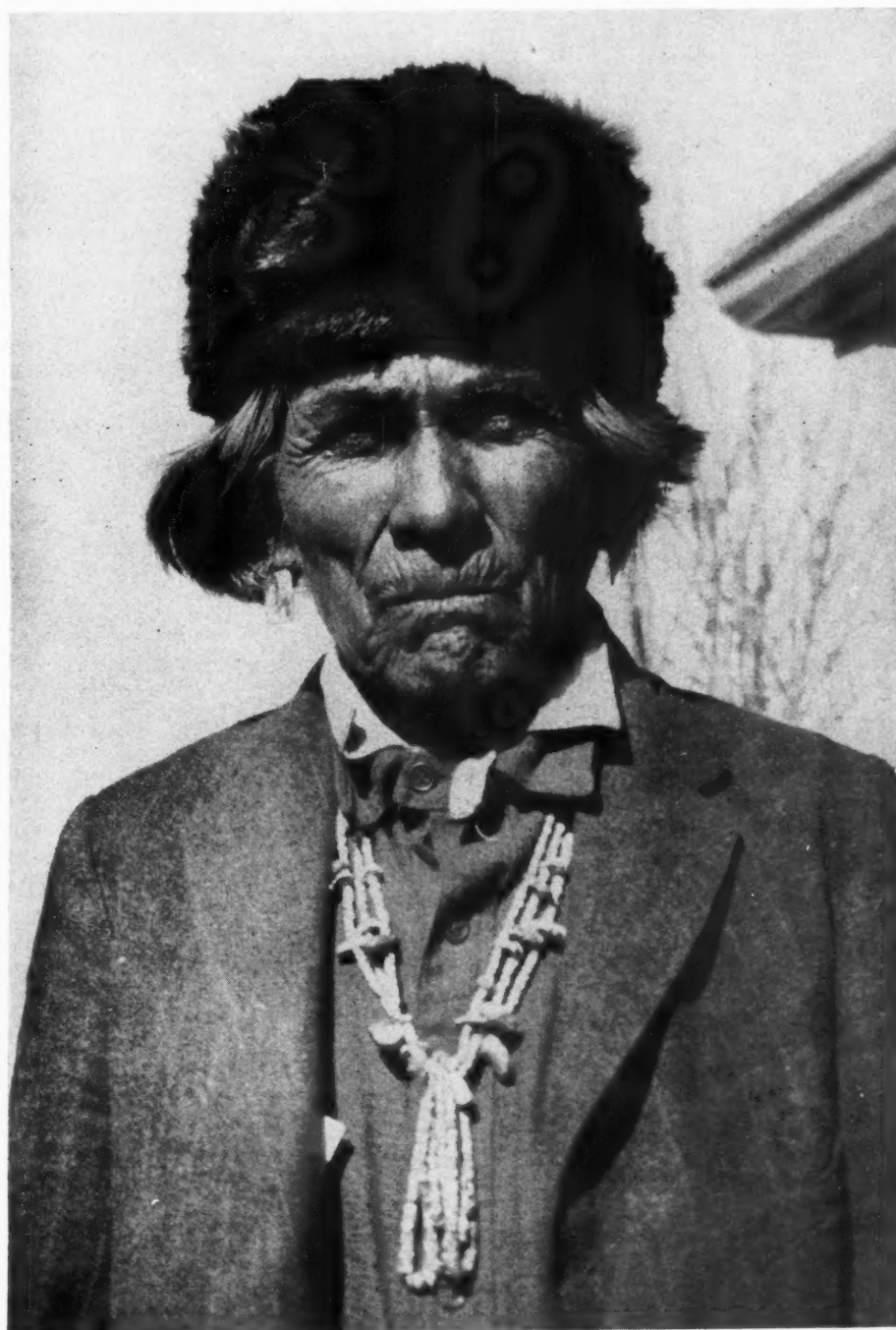
Two months later I jounced over the rutted road that leaps and winds over the rising mesas from the village of Blanco on the San Juan river. Some 30 miles brought me to the scattered Spanish-American

countryside of Gobernador. John and Dot Keur awaited me.

This archaeological team had traveled west from New York. They were spending their summer holidays digging in the village sites of the ancient people of the region. When I arrived they were supervising their New Mexican diggers in a Navajo *pueblito* or small house site.

By the glow of their campfire I told part of my errand for Bead Singer. In the always fanciful mood created by an open campfire we imagined what we might find on the mystic mountain. There might be ancient hogans? Shrines or prayer sticks! Or a great cache of beautifully decorated pottery?

Antonio, a middle aged native agreed



*Hatbli, the Bead Singer of the Navajo.*



*El Gobernador, the Lone Fir mountain.*

to guide us. When a boy he had hunted wild cattle on the Cerritos ridge back of the peak. Old timers had told him of seeing Navajo ascending the mountain. Once he had seen moccasin tracks in the dust. It was from him that we learned that the local name of the mountain was El Gobernador.

The shadows of night were fleeing before the blue of early dawn when we pulled out of camp. We turned south across the distorted shadow of the cross on the sharp steeple of the tiny Gobernador church. John nosed "Arky," the Keur field jalopy, through a break in the scrubby piñon forest.

Down the slope from Gobernador we came to a long adobe. Lying aslant of the door was a rude cross. Turning to Antonio I remarked at the lack of windows, and



*This is the ruins of one of the pueblitos the Navajo built near their corn fields. When the Utes came to raid the Navajo fled to their hogans hidden in the high forests.*

the abject desolation of the place. He stared ahead—and said nothing!

I remembered—and mentally kicked myself for being tactless. This was no abandoned 'dobe. It was *morada* or meet-

ing house of Gobernador's Penitente sect. It was hard to associate our placid Tony with whippings of yucca lashes spiked with cholla. Or to visualize him on the dawn after Good Friday secretly burying a compadre or relative who had died on the cross at the *Calvero*.

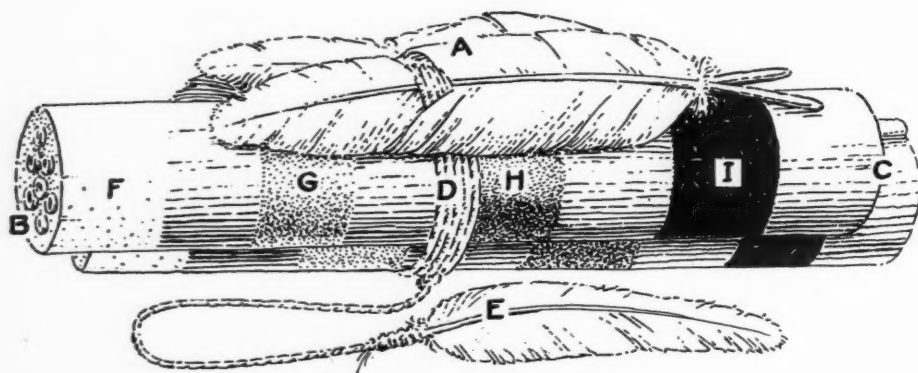
After visiting a pueblito in Pueblito canyon similar to that being excavated by the Keurs, we skirted the fans off the west slopes of the Cerritos ridge. Following two tracks for seven miles we came to the

humble log and mud hut of Juan Fernandez. While we choked down the hospitable Juan's Ariosa coffee, he and Tony strung out tendrils of the Gobernador "grapevine." The New Mexicans have the same way of passing on the news as do the Navajo.

From the bough covered ramada of Juan's place we could get a good view of El Gobernador. The mountain could be reached over a progression of benches. "Arky's" usefulness was over. Bidding Juan adios we picked our way across the checked bottom of his *tanque*, or stock-water lake. On the other side we found a trail leading up through the dwarfed juniper.

Tony packed the water and grub. John and I scurried around hunting for Indian signs. I spied a cairn of rocks. On one side a twig of fresh juniper had been placed under a rock. I shifted a few of the rocks. Then I searched beneath. There I found small fragments of turquoise and white shell. A *tsenadjibih*, or Navajo trail shrine!

While we photographed I told what I knew. Some 30 or more of these shrines are still in use in the Navajo country. They are found beside all important trails.



- A BUNDLE OF BLUEBIRD FEATHERS
- B TURQUOISE BEADS SET IN POLLEN
- C SMALL CUT TUBES OF CARRIZO CANE
- D COTTON CORD WRAPPING WHOLE
- E EAGLE DOWN FEATHER
- F WHITE      H YELLOW
- G BLUE      I BLACK

*This is the kethans or prayer stick found by the author on El Gobernador. Van Valkenbergh sketched the sacred token in his field book, and then replaced it in its cairn.*



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Tony  
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When a Navajo passes by he offers turquoise or places a rock on a fresh twig as he prays:

"May the Gods  
Give me success  
On this journey.

May all my kinsmen  
Have blessing  
On theirs."

That fresh twig on the shrine excited us. The trail came to an abrupt end at the base of a bald slide. Scraggly chamiso with bared roots clung crazily to the uneven face. Half an hour's stiff climb through the fluff of the gyp laden dirt brought us to level ground.

Scattering, we gave the place a fine combing. A clearing opened in the trees. A tripod formed by the interlocked crotches of rotten trees sagged above the chamiso. After circling around to the east I saw what it was. The standing ruin of an *alchides'ai*, or orthodox forked stick hogan of the Navajo.

The three forked poles formed the main frame. Around these had been piled other logs and slabs of bark until a closed cone had been made. Two long stringers slanted eastward from the apex outward to the upright door posts. All brought to mind the Hogan Dedication Song of the Navajo Blessing Way ceremony:

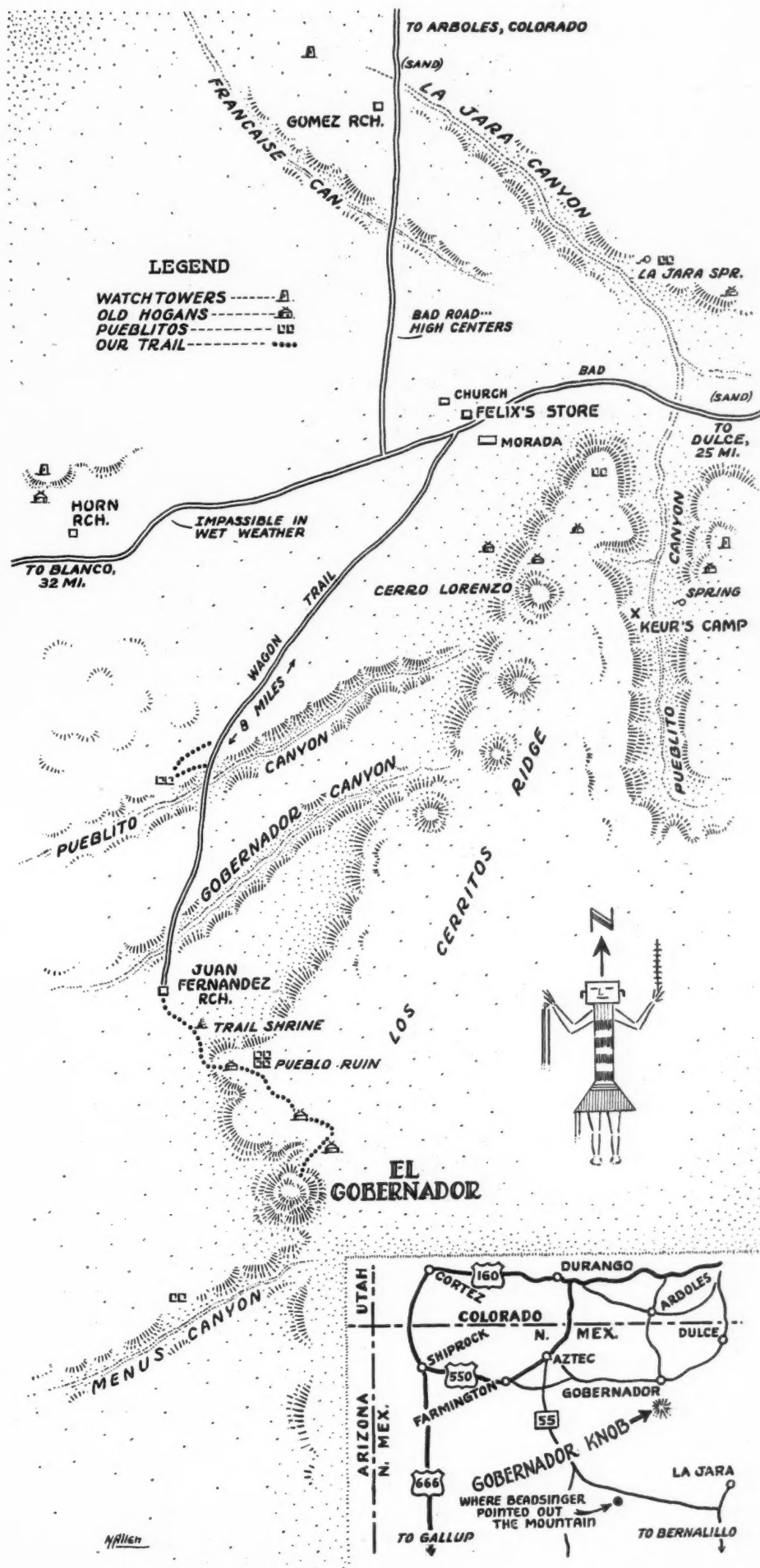
*Djini*, They tell.  
Forked sticks were joined  
Then the eastern door uprights  
Fire and food  
My sleeping place  
A bear-grass mat  
Now long life and happiness came into  
being  
With the building of my hogan.

While John sawed cuts from the main beams which later gave tree ring dates of between 1715-58 A. D., Tony and I searched for what we could. We found three more hogans. Also a number of arrow points, pottery sherds, and a complete grinding outfit of mano and metate.

The shattered scarp of the next bench rose above us. A row of eroded spires sawed into the turquoise sky at the top. The raspy sandstone barked our elbows as we squirmed up through a narrow crevice. We passed through a sandy gap at the summit.

Before us lay a small meadow covered with a high stand of bear grass. Three sides were hemmed in by a U-shaped cliff. Numerous black and white sherds covered the charcoal shot earth as we crossed. Low rectangular squares told us we were passing over a thousand year old pueblo of the *Anasazih*, or old puebloans.

The dwarf cedar zone below us became a dusty green sea. Long layers of slabbed rock stair-stepped upward. Just before





*This photograph of the author was taken at the entrance to one of the ancient tripod hogans found on the sacred mountain.*

passing into the shadowy green of the lush woodland of the north side of the mountain, we came upon a mass of small logs that radiated outward like a wagon wheel. The nearby pile of fire burned rock verified our suspicions. We had found an ancient *txachai*, or sweathouse!

Long ago naked warriors had lain on the cedar bark covered floor after a foray against the Utes or Mexicans. Hot rocks hissed and threw clouds of steam as they plunked into the water placed by the low door. After finishing their sweat the Indians ran outside. Squatting akimbo on the sand they finished their purification with a brisk rubdown of dry earth.

This sweathouse belonged to a hogan group we found nearby. There was no trail. Deer runs were followed. They faded or diverged. Crashing through the tangle of wild grapes and clinging redbud and wild cherry we stirred the piñon jays into an incessant chattering.

As we passed group after group of ancient hogans I remembered what the venerable headman Chee Dodge had once told me, "The old Navajo home which we call the *Dinetxa* lies east of Largo canyon. The old men have told me that the hogans of our forefathers still stand there . . ."

A steep cone rose above the forest. The top layer seemed to be the summit. No hogans were found after leaving the woodland. We scouted the windswept and barren ledges. There was no evidence of human habitation.

We scurried up through the last field of jumbled rock between us and the open sky. Pulling ourselves up through the trailing branches of a dwarf cedar we wiped the dust and sweat from our eyes and looked around. The summit was a small level mesita covered by a large ruin of the *Anasazih* folk!

We rested on the smooth, warm rocks of the rim. Far in the west we could pick out the even skyline of the Carrizo mountains in Arizona. John started to investigate the *Anasazih* site. The type of black motif on the white pottery told us that the period of habitation was near 1000 A. D.

I filled Bead Singer's bag with the granular earth from an anthill. From a house of the Red Ant People it would be more potent. I spied a small cairn. Underneath was a small bundle of calico. The pack rats had been gnawing, but only the ends were frayed.

I pulled off rocks. Out rolled two small tubes of Carrizo cane tied with cotton string. Around them were painted rings of white, blue, yellow, and black. Tied to them were the tail feathers of the mountain bluebird. In the ends were beads of jet, turquoise, clam, and abalone shell. Downward dangled the down feather of the golden eagle. Navajo *kethans*!

I had seen many Navajo prayer sticks or "messages to the Gods," but never a set as elaborate as this. Their fresh condition clinched my growing suspicion. Some shaman with the ancient wisdom had been on the mountain recently. Big "medicine" had been made.

I sketched the prayer stick bundle in my field book. Then I laid them in a scooped out crevice. Over them I placed their cover of rock. There they remain on the mountain top to await the gods for whom they were laid down in faith.

The evening sun was a ball of fire in the nether of the west when we started down. We crossed through the even line of the gloomy shadow slowly erasing out the red light on the earth. When we reached level ground the jet of night, the cloak of *Has-kejinni*, the Black God, wrapped us in.

I did not tell my companions about the *kethans* I had found on El Gobernador.

The raindrops were glistening on the green stalks of the corn when I carried the bag of earth to Bead Singer's farm on the flats of *Txohoteel*. The old medicine man smiled wisely when I told that the summer showers had delayed me. While we sat in the smoke tinted shadows of his hogan I told of my trip up El Gobernador. When I finished, I said, "Now Grandfather, where is the mountain of *Ch'ool'i'i*?"

He opened the bag and poured out a little mound of earth before he answered, "Y'a'd'taa, Good! I needed that earth for rain medicine. Soon after you rode away on Rainy mountain I found that I needed more powerful medicine. I reached the mountain before you. There I prayed to *Toninilini*, the 'Water Pourer' for summer showers. Then I left the prayer sticks that you found. For, my son, you climbed the sacred mountain of *Ch'ool'i'i* to get this earth for me!"



Barringer Crater, popularly called Meteor Crater, located in northern Arizona has long been the subject of controversy. Until recently there were many persons who doubted that the big pit was caused by a meteorite in the first place. There is still some difference of opinion as to the present location and composition of the huge rocket which collided with the earth at some prehistoric date. In the accompanying story, H. H. Nininger, director of the American Meteorite laboratory at Denver and a widely recognized authority on meteoric phenomena, has summarized the generally accepted conclusions of those who have studied this crater. Also, he has answered many questions regarding meteors in general.

## Visitor From a Distant Planet

By H. H. NININGER

**A** GLINTING mass of cold gray steel is speeding in its course through empty space at a hundred times the velocity of a rifle bullet. Along this course it has darted unhindered for millions of years, but on this fateful day disaster hovers near.

Out in the distance ahead looms a giant sphere which seems to grow in size at an alarming rate. Were the mass of steel able to hold true to its course a collision might be averted; but as the two objects approach each other, the smaller mass comes under the gravitational influences of the larger and is compelled to swerve toward it and to move with increasing speed.

With lightning-like suddenness the flying mass of steel plunges into the blanketing atmosphere of the earth. Though frigid, it pierces the atmosphere with such violent speed that the resulting friction is devastating. Its surface instantly flashes out into a blazing rocket of dazzling splendor. Sparkling and sputtering in a racing fountain of flaming incandescence, it thunders downward through the resisting sea of air with the noise of a thousand dive bombers.

Amid a din of roaring, booming, screeching and whistling the space-traveler approaches the earth. As it does so the accumulated buffer of compressed atmosphere in front of it dissipates itself in a terrific blast which opens the way and the giant projectile plunges deep into the solid rock of the earth's crust.

Now nature has decreed that energy shall not be lost or destroyed. Consequently, when a moving mass is compelled to stop, its energy of motion must be absorbed by the molecules of whatever materials are at hand. As the bullet melts itself and heats up the steel plate against which it is fired, so the immense volume of energy in this great mass of steel is quickly absorbed by the molecules of which it is composed and by those of the stone into which it has plunged. These super-charged particles now leap with twenty times the violence of exploding T.N.T., shattering and lifting the surrounding rock strata, and hurling skyward millions of tons of fragments. These fall in a crushing shower, half filling the hole and forming a mountainous collar surrounding it. Fine dust and gases rise in a mighty cloud. Thousands of tons, caught in the swirling rush to fill the evacuated path of the meteorite, are borne away into the stratosphere.



*One of the nickel-iron meteorites picked up near Barringer Crater. Weight 230 pounds.*

Thus, a giant bomb from space produced the greatest bomb crater on the Earth.

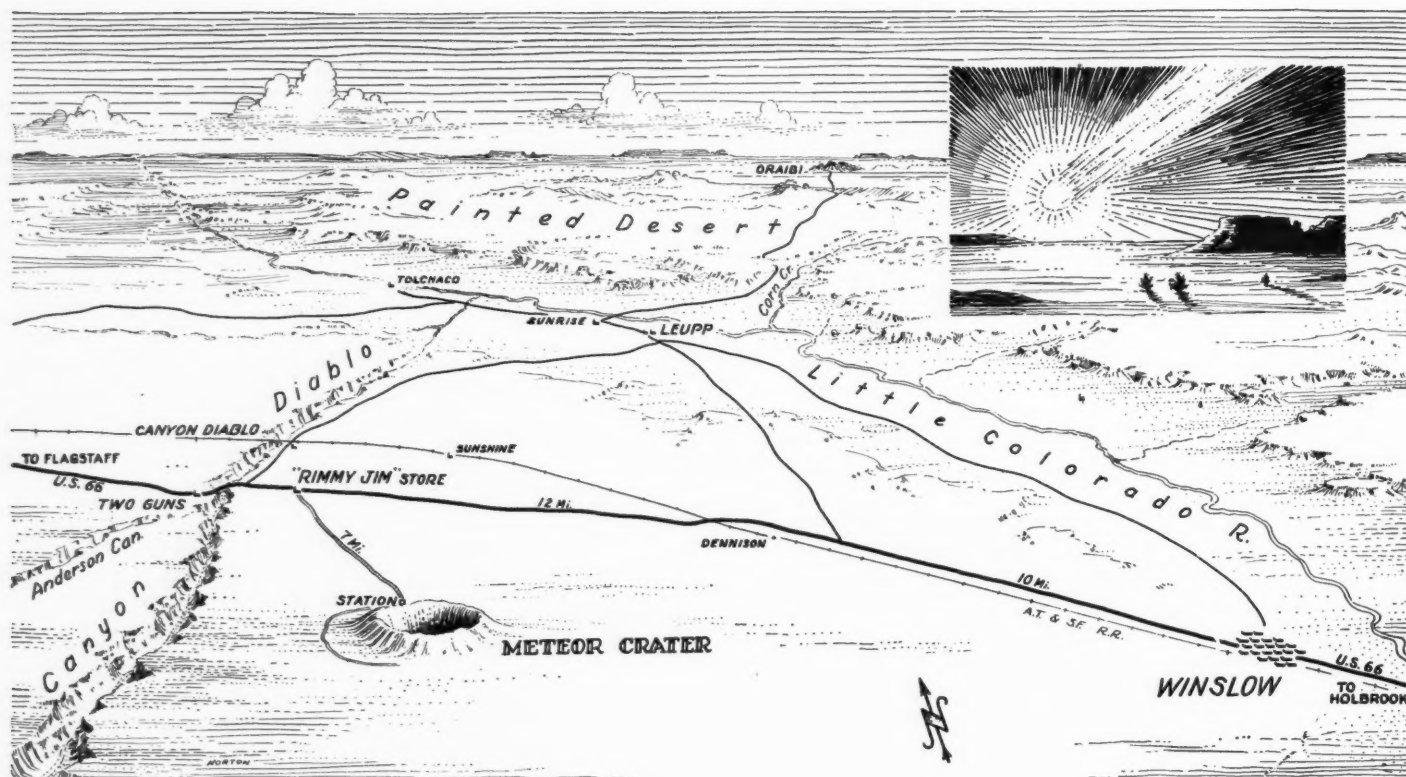
### The World's Greatest Bomb Crater

Imagine the Rose Bowl or the Yale Bowl enlarged to seat 2,600,000 people and you can visualize the extent of the great Barringer meteorite crater in Arizona. The largest bomb craters produced by man have been less than 100 feet in diameter. There would be room in the great Arizona meteorite bowl for 10,000 such craters and plenty of space left between them. When the Universe besieges us man's puny efforts at destruction dwindle to insignificance.

Man has had very little experience with celestial bombs. But his history has covered an extremely brief span in the geological career of our planet. The siege from the skies goes on at a very leisurely tempo, but it is no less real because it is slow. If the eight-month's siege of Britain had been spread over several geological ages, the Londoners would never have discovered that they were being bombed. Man only recently has begun to realize the extent of the heavenly siege to which the earth has been subjected since it was born to membership in the solar family.

### The Moon Tells a Story

Glance at the face of the moon as seen through any good telescope with a 6-inch lens, or larger. There you may see the record. For the Moon has been subjected to the same hail storm of meteorites as has the Earth. And the moon cannot keep a secret as well as Mother Earth. Here the forces of wind, water and frost, rapidly wear down and finally erase any scars that are produced by bombings from space. They are swept full, scrubbed away,



or conveniently covered with a luxuriant carpet of vegetation. But on the Moon, things are different. There is no air or wind; no water or frost; no waves or streams; no growth or decay.

Whatever craters have been produced on the Moon are still visible, unless other celestial bombs have arrived later, to blast them out of existence. Only a little study of her surface reveals that this has happened again and again until her surface is more pitted than a bomb-scarred battle field.

Also, on the Moon other conditions are different. Gravitation is very weak—only one-sixth as great as on the Earth. Rock materials there are lighter than wood is here. Material is easily moved, and, because there is no air resistance, when an object is thrown it goes a long way. Hence when a meteorite strikes, it throws rock fragments many times as far as would the same blast here on the Earth. Meteorite craters on the Moon are in many cases 50 or 60 miles across and 3 to 5 miles deep! Without her protective atmosphere the Earth would have presented a similar appearance.

#### A New Idea

Completely new ideas are rare in geology, as they are in most other realms of thought. It was not until the 1880's that anyone thought of meteorite craters on the earth. Consequently, when Dr. D. M. Barringer, a mining engineer, set out at the turn of the century to prove that the great bowl-shaped hole near Winslow, Arizona, had been caused by the fall of a meteorite, his theory was regarded as a joke. The "big shots" in geology hastened to assure their listeners that this crater was the result of a steam explosion caused by underground sources of heat. They clung to this view in spite of the fact that the crater showed not the slightest evidence of volcanic action. Since they occupied responsible positions and spoke with authority they were believed and their believers in turn added weight to the opposition which Dr. Barringer had to face. Unfortunately, all of his early attempts to discover a meteorite in the crater failed. This gave more comfort to the enemy. But Dr. Barringer was not one to give up. He persisted, spent large sums of money, and for 20 years worked, surveyed and resurveyed; searched and searched again. Finally, after concluding that the meteorite had come in

at an angle instead of vertically, his drill encountered meteoritic material at a depth of 1346 feet beneath the crest of the southern rim.

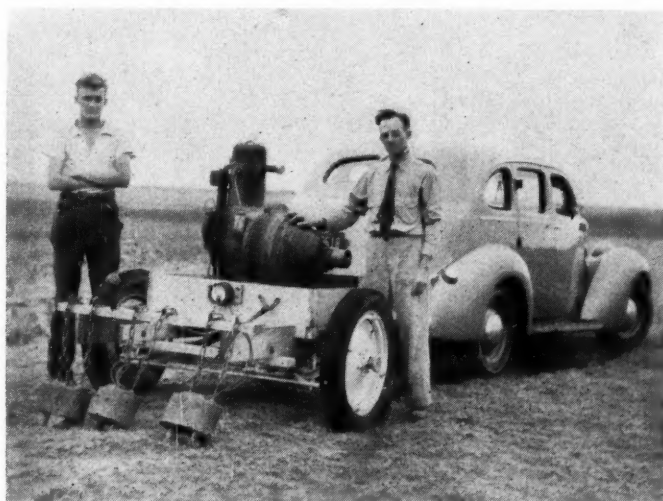
By this time (1923) opposition to Barringer's idea had developed into a sort of tradition. To oppose was orthodox; to endorse was unsound. Consequently, the opposition spoke fearlessly, and though Barringer continued to insist that his case had been proven, even his colleagues said little in his defense. Belief in his idea gained slowly. Meanwhile, a second, smaller crater had been found near Odessa, Texas. But only one man, D. M. Barringer, Jr., was willing to put himself on record by pronouncing this a meteorite crater. It was not until a group of 13 craters were discovered in Australia in 1931 that opinion began to swing to Barringer's side of the controversy. He died before his theory met with general acceptance. But today, no one whose opinion deserves serious consideration doubts that the Barringer crater was caused by meteoric impact.

The exact time of this great fall cannot be known. The most careful estimates place it from 20,000 to 50,000 years ago. But whatever the date, we are sure the area that is now Arizona received a terrific jolt and the earthquake spread out hundreds of miles in all directions. More than 300 million tons of solid rock was shattered and heaved aloft by the blast. Thus was piled up a ridge of fragments encircling the crater pit, averaging about 150 feet high at its crest and extending outward to a width of more than a half mile. On a clear day this ridge can be seen from a distance of 20 miles or more. Many scattered mounds mark the landing of rock fragments out to a distance of more than a mile from the pit. Although the present floor of the pit is only 570 feet below the rim, Barringer's explorations proved that the real bottom of the crater reaches a depth of 800 feet below this level. In other words, the crater is now filled in more than half way to the top.

An area of about 100,000 acres surrounding the crater was found to be more or less sprinkled with lumps of meteoritic nickel-iron. Large chunks of 100 pounds or more were sparsely scattered over this entire area and smaller ones more abundantly near the crater. By the use of a magnetic rake, in 1939, we discovered that very small fragments the size of grains of corn and



larger, were scattered out to a distance of about  $2\frac{1}{2}$  miles in all directions from the crest of the rim. Our survey indicated that from two to three millions of these fragments are embedded in a one-inch layer of soil over this area. No complete record has been kept, but probably 15 to 20 tons of the larger pieces from one to 1400 pounds have been gathered from an area of 160 square miles since the first pieces were picked up in the late 80's. In addition to these metallic specimens, there are millions of oxidized pieces. A survey indicates that the oxidized material is



*This is the magnetic rake which gathered tons of small fragments in the area adjacent to Barringer Crater.*

at least 100 times as abundant as the metallic particles. These oxide fragments were derived from the metallic masses which have been rusted through and broken down by weathering.

The fact that the crater lies in an area that is so richly sprinkled with meteorites would have been sufficient reason for geologists to at once conclude that it was of impact origin and not volcanic, had they believed in the existence of such craters. However, there were plenty of other reasons for not considering the crater volcanic.

Volcanic craters generally lie in the tops or on the sides of volcanic cones. Their floors are usually elevated above the surrounding plain. Meteorite craters, on the other hand, have floors well below the level of the terrain outside their rims. The walls of volcanic craters are composed of lava, but not so with meteorite craters unless the fall has occurred in a lava formation. Steam explosion craters may have their floors below the general level but these, like true volcanoes, always extrude more or less of lava after the explosion. Also, meteorites were found mixed in with the debris which forms the rim of Barringer's crater, proving that either the meteorites had fallen previously or else they fell at the same time the crater was formed.

Finally, in the pit and in the rim of the crater are deposited millions of tons of rock flour. This consists of the finely pulverized fragments of sand grains and has been produced by the shattering of the sandstone into which the missile penetrated. A considerable amount of this finely powdered silica has been refused into a very light porous substance resembling pumice. To fuse silica requires a temperature higher than is known to have been produced in any steam explosion crater. But this is not too high a temperature to be developed by the impact of a meteorite. Even the slower speeds of large meteorites are more

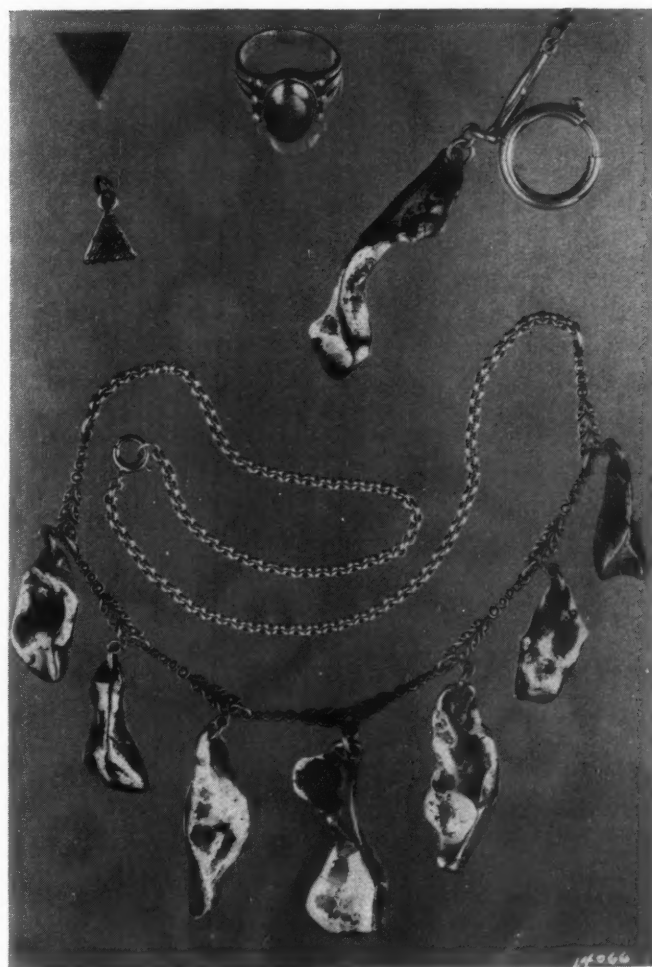
than sufficient to produce such temperatures upon their impact with the solid earth. This brings us to the question of what became of this great meteorite.

### Where Is the Meteorite?

During recent years the most controversial question concerning the Barringer crater has been "What became of the Meteorite?" Even Dr. Barringer himself admitted that with all of his drilling and digging he never encountered any large solid body. Meteoritic material was unquestionably encountered in the drill hole that was sunk from the southern rim. Also, later, in two holes which were put down in the southwestern part of the pit. But in all of these cases the drill passed intermittently through meteoritic material and rock fragments. So far as is known no large solid body was ever encountered.

Lately, several small meteorite craters have been excavated. First, the Haviland crater in Kiowa county, Kansas. Afterwards one in Australia and some in Texas. In all of these, conditions were very much the same, namely, after the filled-in contents of the crater were removed, a group of meteorite fragments were found scattered over the bottom of the bowl-shaped pit. In the Haviland crater the fragments numbered thousands. In others hundreds, or only a few, were found. In all cases, the fragments appeared to be the result of a breaking up of one parent mass as it entered the soil.

Men interested in gunnery have learned through experiments



*The seven meteorites in the necklace and the one on the watch charm are natural specimens. The others are polished sections.*

*H. H. Nininger in his office examining a newly acquired meteorite from the vicinity of Barringer Crater.*



that when a projectile is fired at great speed against a target it undergoes a more or less complete explosion, depending upon its velocity, its composition and the nature of the target. It may be simply flattened, burst into fragments, or be completely transformed into dust and gases. In other words, it may, depending upon its velocity, undergo any degree of disintegration to the point of becoming a violent explosive.

The Barringer crater possesses all of the ear marks of an explosion crater. Its circular form, with steeply uplifted strata facing the pit; the profuse heap of ejected fragments immediately surrounding the crater, but reaching only about the distance that their size and irregular form would allow them to be thrown against resisting atmosphere. Larger specimens were scattered much farther. The large deposit of rock flour, the fused silica deposits and the admixture of minute oxidized fragments in the material which fills the lower part of the pit all are in harmony with the explosion theory, but not necessarily indicating a very complete explosion.

How much of the meteorite remains in the depths of the crater cannot at present be known. Magnetic surveys have indicated a considerable bulk of material in the southwestern sector of the pit and under the southern rim. Indications have also been found of magnetic material to the south of the pit. In my opinion there are thousands of tons of fragments in the bottom of the pit under its present floor. Some of these may be as large as an automobile or even larger. They should be more abundant in the southwestern part of the pit than elsewhere and great numbers are buried in and under the rim as well as out on the surrounding plains.

But this scattering of fragments represents only a minor part of the great mass which produced the crater. The colliding

witnessed by man in historic times. That was the fall in Siberia, June 30, 1908, when a group of large meteorites plunged into the forested wastes of north-central Siberia. There, not one but many craters were formed; but all of relatively small size, the largest only a few hundred feet across. All together, the swarm was probably far less in weight than that which produced the Barringer crater. Yet it laid waste several hundred square miles of forest—flattening it to the ground. Those few inhabitants who were within 30 to 50 miles of the impact found it a trying ordeal. Some were thrown down and rendered unconscious for a time. Their dwellings were wrecked and a large herd of reindeer which had been feeding where the impact occurred was completely exterminated. Fortunately for man, such events have been very infrequent in the earth's history.

### The Meteorites

Meteorites which arrive on the earth are in most cases composed of stony matter in which are embedded abundant small particles of nickel-steel. Some are composed of about equal parts of stone and metal, while others are entirely metallic, or nearly so. The Barringer crater was produced by one of the latter variety. The meteorites which have been picked up in the vicinity of the crater may be assumed to be the fragmentary remains of the great mass which collided with the earth at that point. They are composed mainly of nickel-steel with numerous inclusions of sulphide of iron, carbon and a phosphide of nickel-iron known as Schreibersite. Platinum is present to the amount of about one-fifth ounce per ton. There are also traces of copper, chromium, cobalt, and several other common minerals. Nickel constitutes about 5 to 7 per cent of the whole. Iron constitutes from 80 to 90 per cent.

The meteorites are very difficult to cut, far more difficult than ordinary steel, due to their content of schreibersite, silica, sulphide and carbon. The latter is sometimes in the form of a diamond.

When a polished section of the meteorite is properly treated with acid there develops a striking pattern of lines and areas known as Widmanstätten figures. This pattern is readily destroyed or greatly dimmed by heating to about the point of redness. Many of the specimens that have been cut show that they have been heated so that the Widmanstätten pattern is very weak or entirely destroyed. Others show a very beautiful pattern.



*Photograph of meteoritic cloud left by meteorite which fell in northeastern New Mexico May 24, 1933.*

mass may have weighed a million tons. Certainly it was large, and the blast which it produced would have been a spectacle worth going far to behold providing one could have been stationed at a safe distance of perhaps a hundred miles.

Only one such event of comparable magnitude has been





"We both jumped and landed on the boulder."

## Gold Hunters Are Like That!

On a scientific expedition along the Colorado river in southern Utah, Charles Kelly and his companions saved the life of a prospector who had become separated from his camp and was near starvation. And here is the story of that rescue—with an interesting sidelight on human behavior under harrowing circumstances.

By CHARLES KELLY  
Illustration by John Hansen

**F**OR two days we had tramped down the rocky bed of North wash, a dry side canyon, to reach the Colorado. A July sun, bouncing off high red sandstone walls made the narrow canyon a bake oven, and in 30 miles we had found but one spring.

There were five of us in the party, under the leadership of Dr. Julian H. Steward, starting on an archaeological ex-

ploration of Glen canyon of the Colorado river. Our two canvas boats and supplies were being hauled down the wash in a light wagon.

It was nearly sundown of the second day when we finally turned the last bend of North wash and saw the muddy waters of the river. We let out a mighty shout which echoed and reechoed from the perpendicular red walls. We thought we

were the only men in that whole wild section; but in that we were mistaken. Hardly had the echoes died away before an old man pushed his way through the willows along the bank and came toward us, waving his arms frantically.

"Hurry!" he shouted. "He's over there across the river!"

"Who's over there?" we asked, unable

to understand what he was trying to tell us.

"My partner!" the old fellow said. "He's been there nine days without food, but I think he's still alive. I saw him moving this afternoon."

We looked where he pointed. Far across the swirling water on a high perpendicular bluff we finally made out the figure of a man. We waved and shouted, but there was no response.

"Who is he, and what is he doing over there?" we asked.

"He's one of my partners," the old man said. "There were three of us. Bill and Sam built a raft and tried to cross the river. The raft broke up on a rock. Bill's been over there nine days, but I haven't seen anything of Sam; guess he's gone. Have you fellows got a boat?"

Without waiting for further questions we unpacked one of the folding boats, hurriedly put it together and started across for the marooned man. While two of my companions rowed across against the stiff current, I got a little more information from the excited old fellow.

Bill and Sam, he said, lived in Las Vegas. They were about 35 years old, and like most Nevadans had done considerable prospecting. Having heard that the sands of the Colorado contained placer gold, they had long wanted to investigate the report. The older man had been in the Klondike in 1898 and had prospected all his life. When Bill and Sam learned he understood placer mining, they induced him to accompany them to the Colorado river. The Old Sourdough, as we called him, was 76.

The three men had traveled down the wash as far as possible in an old battered car, then packed their supplies down to the river on their backs. They made camp in a small cave at the mouth of the side canyon. For several days they had prospected the sands on the west bank without much success.

Finally the two younger men decided to cross and inspect a likely looking bar on the east side. For this purpose they had built a raft of driftwood. But the current was too strong and the raft was soon wrecked on a sharp boulder near the opposite shore. Sam had disappeared, but Bill was still over there.

While we talked the canvas boat reached the opposite shore, landing on a bar some distance upstream. We could see the figure of Bill as he tried to make his way down the cliff to where the boat had landed. He attempted to run, but his legs were too weak and he fell every few steps. They finally had to carry him. He was hysterical from hunger and fright and insisted on lying flat in the bottom of the boat, where he couldn't see the water.

When they pulled into shore below camp, the two oarsmen lifted Bill out of the boat. His feet had scarcely touched solid earth before he fell to his knees on

the wet sand, raised his hands heavenward and started to pray.

"Oh Lord," he said, with tears streaming down his sunburned face, "you've been mighty good to me. You've sent these men here to save my life, and I'm sure thankful. I've been a big fool, Lord, chasing around the country looking for gold, but now that you've seen fit to let me live, I'll never hunt gold again as long as I live. Never again, Oh Lord, I promise."

We carried him up to his camp in the cave. He blubbered like a lost child when he greeted his old partner. We made a bed for him and gradually got him quieted. Old Sourdough opened a can of soup and fed him a spoonful at a time at short intervals. Within two hours he seemed normal again, and was able to tell us his story.

"We dragged our raft a half mile upstream," Bill said, "intending to pole across to that bar on the other side. But the river was deeper than we expected and when the current caught us our poles were useless. The raft started down like a chip in a whirlpool. In less than a minute we were below the bar, where the current shot us over toward that sheer wall. Just below the wall was a big boulder that had fallen from the cliff. Our raft hit it head on and broke up like a bunch of matchsticks. When we saw what was going to happen we both jumped and landed on the boulder. The raft floated away in pieces and we lost everything."

"There we were marooned on a boulder in the river. It was about 50 feet from the sheer wall on the other side, but most of the current seemed to be flowing between the rock and the wall. I couldn't swim, but Sam could. He studied the situation for a half hour and decided to swim across to the wall and try to work himself up through a narrow crevice. He took off his clothes and dived. That was the last I ever saw of him. He never came up."

"I stayed on the boulder the rest of that day, the next night, the following day and night. It was big enough to lie on, but sloped off into the water so I had to keep awake to prevent falling off. Finally, on the third day a big log came floating past. I grabbed it, climbed on and started floating down, hoping it would land me somewhere below, on this side, so I could walk back to camp. I took off my belt and strapped myself to the log."

"Just below here is a big rapid, full of rocks, where the current roars through a narrow channel. I was afraid of the river anyway, but when I saw those rocks and big waves I thought my time had come. The log headed for the worst part of the rapids, and the waves nearly drowned me, but I got through without being knocked off the log."

"Six miles below there is another long rapid. When I got to the upper end of that one, and heard it roar, I must have fainted, because I don't remember anything for a long time. When I came to my senses, the log was stuck on a sandbar. I waded to shore and tried to get my bearings. I didn't know how far I had come, but I was still on the wrong side of the river."

"I was afraid to take any more chances on the log, so I decided to walk back upstream. By that time I was mighty weak and terribly sunburned from lying two days on that hot rock. The river bank was densely overgrown with willows and I had to fight my way through, a step at a time. By the time I had gone a mile or two it was dark and I slept underneath a ledge."

"In the morning I started again. Soon I came to a sheer cliff running down into the river. The water was too deep to wade and I couldn't swim, so there was no way of passing except to climb around it. The cliff was at least 400 feet high and I had a terrible time getting to the top. When I finally got up I walked along the top hunting for a place to climb down, but getting down was worse than climbing up. I got ledged up several times and had to drop 10 or 15 feet to get out. I'm still black and blue from the falls I took."

"But I had only gone a short distance until I came to another sheer wall. I managed to climb out again, but hadn't gone far along the rim until the path was barred by a deep, lateral wash. In order to get across it I had to walk miles away from the river, and almost choked from thirst before I got back to water. There were several places like that. I must have walked 50 miles in coming back about 12 miles by river from where the log left me."

"When I finally did get back I was no better off than before; I was still on the wrong side. But I was too weak to make another try, so I found a small cave over there and just crawled in out of the hot sun and waited. I could see Old Sourdough was still here. He waved at me and shouted, but I couldn't hear a thing on account of the roaring rapids. I was so weak I could hardly stand, but couldn't find a thing to eat. I did catch some lizards and tried to eat their tails, but it made me sick. I had river water to drink, but it was half mud, and left several pounds of concrete in my stomach. What were you planning to do, Partner?"

"I was too old to be of much use," the Old Sourdough replied. "I couldn't swim and I didn't dare try to make another raft. I knew I couldn't get far if I tried to walk out. But back at Trachyte ranch they told us a party was coming down here soon. I didn't know when, but I hoped they'd



come within a few days. So I just waited and hoped. I saw Bill and Sam land on the boulder, then after a little while there was only Bill. He was there two days, then disappeared and I thought he was drowned too. I had grub enough to last a month, so I decided to stay until someone came along. A few days later Bill waved to me from across the river, and I was mighty glad to know he was still alive. But I couldn't do anything for him. The waiting nearly drove me crazy. It's been nine days since the boys pushed off on the raft. I figured to wait one more day and then try to walk to Trachyte ranch, 40 miles, for help. But I'm getting so old I probably couldn't have made it. That yell you fellows let loose was just about the finest music I ever heard."

It was midnight when we left the prospectors and made our own camp in the willows a short distance upstream. By that time Bill had taken one can of soup and part of a can of tomatoes. He was feeling much better. After we left Old Sourdough gave him some boiled rice and condensed milk.

In the morning we began loading our equipment into the two boats preparatory to pushing off on our voyage through the canyon. We didn't go down to the cave, presuming Bill would want to sleep and rest most of the day. We finished stowing the stuff about 10 o'clock and were about ready to push off, when Old Sourdough came up the river bank carrying a gold pan and a shovel.

"How's Bill this morning?" we asked solicitously.

The old fellow jerked his thumb back toward his camp. "There he comes," he said, grinning. We could scarcely believe our eyes, but it was Bill all right, walking with a firm, steady step.

"Come on, boys!" he shouted. "I'm going a couple miles up the river to stake out some claims. I'll stake one for each of you. You saved my life last night."

Bill's physical weakness and mental depression of the previous nine days had entirely disappeared—along with his solemn vow, on bended knees, never again to hunt for gold.

Prospectors are like that.

• • •

#### New Lake on the Desert . . .

After having been dry for several years the Laguna Salada basin just south of the international boundary in Lower California was refilled with water from the Colorado river during May. The lake, 40 miles long and from 5 to 8 miles wide, is now at the highest level within the memory of local residents. The filling of this basin is a natural phenomenon, due to unknown changes in the channel of the stream where it flows through the delta.

## DESERT QUIZ

This month's Desert Quiz calls for at least an elementary knowledge of a wide range of subjects including desert history, geography, mining, mineralogy, botany, Indian lore, and literature. So do not feel badly if you do not make a perfect score, or even half of them. The average person will know less than 10 of the answers. Only the seasoned desert rats will reach 15. But even if you do know all the answers, you can learn some interesting things about the desert from studying this list and the answers. The answers are on page 28.

- 1—Bill Williams river in Arizona was named for a famous— Stage coach driver..... Steamboat pilot..... Mountain man..... Army officer.....
- 2—A mano was used by the Indians to— Kill game..... Offer prayers to the gods..... Adorn the medicine men..... Grind seeds.....
- 3—The old Bradshaw freight and stage road crossed the Colorado river near— Ehrenberg..... Yuma..... Parker..... Picacho .....
- 4—Gran Quivira national monument is in— New Mexico..... Arizona..... Utah..... Colorado.....
- 5—According to legend the Lost Dutchman mine of Arizona is located in the— Harqua Hala range..... Superstition mountains..... Camelback mountains..... White mountains.....
- 6—Going south from Tucson into Sonora, Mexico, you would cross the international boundary at— Dougias..... San Luis..... Nogales..... Naco.....
- 7—The mescal plant that grows in the desert region is— Yucca..... Cactus..... Palm..... Agave.....
- 8—If you owned a cinnabar mine with a mill for processing the ore you would ship your product to market in— Ingots..... Flasks..... Bags..... Bales.....
- 9—Betatakin is the name of a— Hopi chief..... Ute Indian reservation..... Old Indian cliff dwelling..... Ceremonial god of the Navajo.....
- 10—A chuckawalla lizard has— Two feet..... Four feet..... Eight feet..... Crawls on its belly.....
- 11—"The Goosenecks are in the— San Juan river..... Colorado river..... Little Colorado river..... Green river.....
- 12—Blossom of the Beavertail cactus is— White..... Yellow..... Orange..... Magenta.....
- 13—In locating a mining claim the location notice should be placed— At point of discovery..... In all four corner monuments..... In the center of the claim..... On nearest mountain peak.....
- 14—Nevada's famous bottle house is located at— Goldfield..... Tonopah..... Rhyolite..... Beatty.....
- 15—Water level in the Salton Sea of Southern California is governed mainly by— Rainfall in the surrounding area..... Springs in the bottom of the Sea..... Surplus irrigation water from Imperial Irrigation district..... Overflow from the Colorado river.....
- 16—Mangus Colorado was a chief of the— Yumas..... Apaches..... Pueblo Indians..... Utes.....
- 17—Going from Needles, California, to Las Vegas, Nevada, by the most direct improved road, you would pass through— Chloride..... Bagdad..... Searchlight..... Kingman.....
- 18—The book "Cartoon Guide of Arizona" was written by— Hal Empie..... Norton Allen..... Ross Santee..... Reg Manning.....
- 19—Your best view of the Wasatch mountains would be obtained from— Tucson..... Salt Lake City..... Santa Fe..... Reno.....
- 20—Travertine is a precipitate of— Gypsum..... Copper..... Limestone..... Arsenic.....

This is the story of a poem that  
was forty years in the writing

Many thousands of manuscripts have come to my desk in the last five years—stories of fact and fiction, of comedy and tragedy. Some of them sparkled with interest, others were stilted and dull. From all of them, I would select this true story by Phil K. Stephens as the most human narrative I have read. If you and I could learn the simple truth this humble desert woman has expressed in the poem it "took forty years to write" we would have acquired a philosophy of life that would contribute more than all else in the world to our own and the happiness of mankind universally.—R.H.

## *'Beauty is not in faces, But in the hearts of men'*

By PHIL K. STEPHENS

Illustration by John Hansen

**M**ANY years have passed since that time when, on the rutted road to Ehrenberg, I saw wavering wheel tracks turning off from the main road and leading toward the south. I left my car and examined the unusual prints. A light spring wagon drawn by burros was my conclusion.

But why? Where to? What manner of man driving into that barren desert? Wondering, somewhat fearful, I decided to follow.

After some time, topping a rise little higher than the surrounding country, I saw beside an arroyo, perhaps a mile distant, a rough shack and other signs typical of the surroundings of a desert camp. In a few minutes I was there.

I followed the tracks around to the south side of the shack and stopped in utter puzzlement. The door, open at that time of year, was in the center of the building, a structure rude beyond description. On either side of the door was a cactus garden lovely as an exquisite painting. A small remuda close by furnished a support from which hung a large olla, its sweaty sides glistening in the light. The canvas flaps of the shack were propped up revealing colorful drapes inside the screens.

I left the car, walked to the door and rapped. My eyes, accustomed to the fierce

light of the sun, could not accommodate quickly to the darkened interior. Then suddenly, materializing from the darkness, a little old woman stood at the door. From her left wrist hung a knitted bag, her right hand inside the reticle.

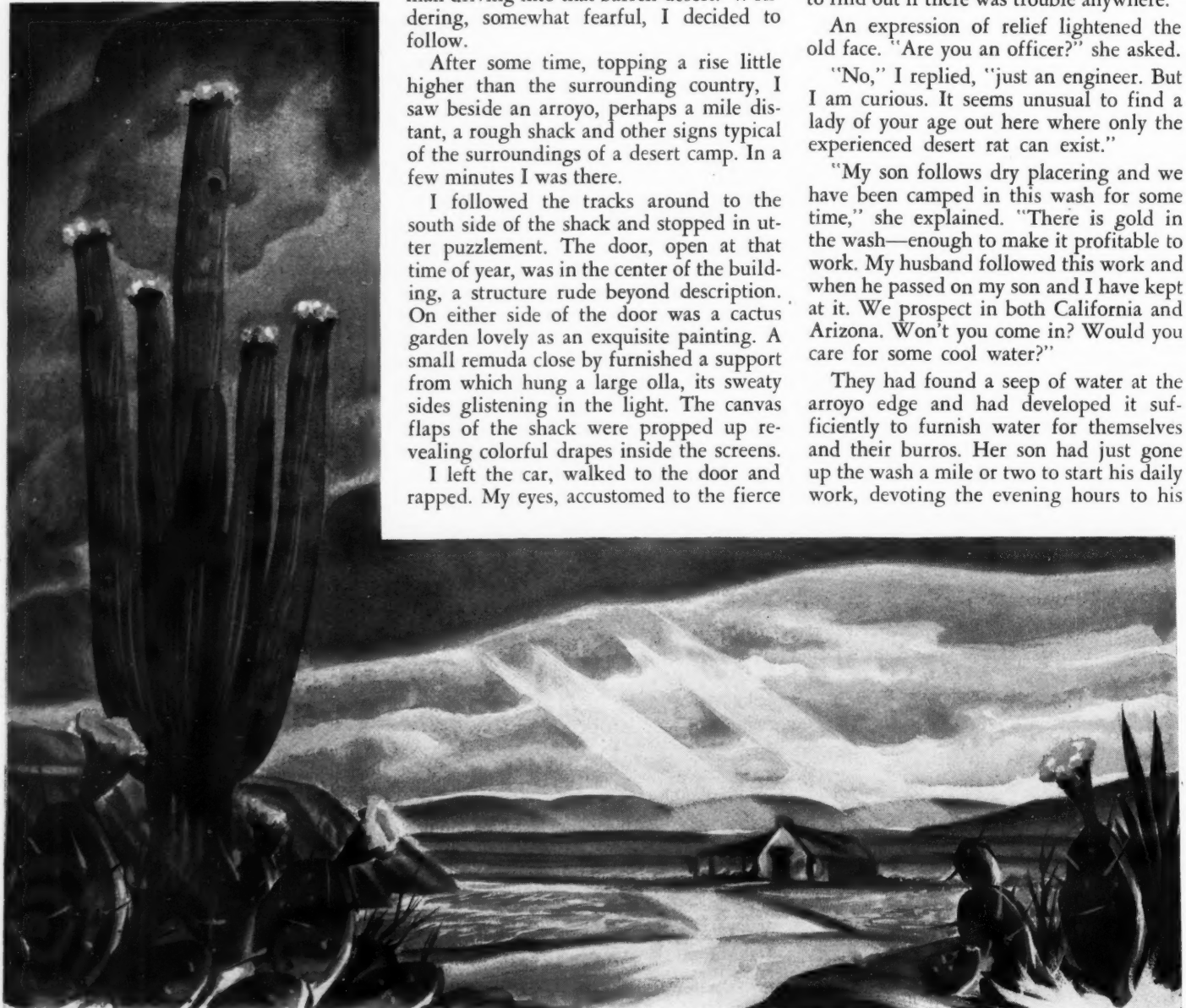
"Will you pardon me?" I asked. "I saw wheel tracks leading from the road and of course, being a desert man, I had to find out if there was trouble anywhere."

An expression of relief lightened the old face. "Are you an officer?" she asked.

"No," I replied, "just an engineer. But I am curious. It seems unusual to find a lady of your age out here where only the experienced desert rat can exist."

"My son follows dry placering and we have been camped in this wash for some time," she explained. "There is gold in the wash—enough to make it profitable to work. My husband followed this work and when he passed on my son and I have kept at it. We prospect in both California and Arizona. Won't you come in? Would you care for some cool water?"

They had found a seep of water at the arroyo edge and had developed it sufficiently to furnish water for themselves and their burros. Her son had just gone up the wash a mile or two to start his daily work, devoting the evening hours to his





task, the heat of the day being too great for labor.

As we talked the sun had sunk below the horizon and the western sky glowed in the riot of color of a typical Arizona sunset. The shy creatures of the night started their serenade, the muted music of their calls coming to the ears in vibrant crescendo. A saddened coyote lifted his plaint from a distant hill, answered at length from another hill by an equally sorrowful wail. The desert was responding gratefully to the cooling influence of the nightly breezes.

The little old woman talked much of the desert and her wanderings with her man. The Mojave and the Picacho in California and along the rivers and the dry washes of western Arizona. Never a big strike but enough at all times for a living and a modicum of comfort. Then her man, old and worn, had gone on the final adventure, a journey he needs must make alone. Then, indeed, had life and time passed her by and she was but tarrying a few hours with her son.

As she talked I was struck by her insistent reference to the beauty of the desert things. The flaming sunsets, the jagged silhouette of distant mountains against the ever-changing pastels of sunrise; the beadwork on the back and sides of a gila monster, the geometric pattern along the slithering length of the rattlesnake; the delicate little ground flowers of the spring; the ragged Joshua tree, apart from time and change, the lupines and the desert lilies, the blazing stars swinging low in an ebon sky, the blue haze on far ranges, the cactus in the time of bloom, exemplifying the emergence of delicacy and beauty from mean sources.

"Why have you not written these things down?" I exclaimed impulsively. "The world is in need of such thought."

"Do you think so?" she asked. "But I could never write to make people see. But," shyly, "I have written a few verses. It's taken 40 years to write and I finished it just the other day. It's such a foolish little thing—the only thing I ever wrote. Of course you wouldn't care to see it."

"Please, may I?" I asked.

She lifted an old and tattered Bible from a shelf and took out a sheet of paper from within its leaves—a remnant saved from a paper sack. "I will read it," she said, "but it sounds as if a man wrote it. It just sort of shaped itself. No one has ever seen it."

She adjusted her spectacles and began:

*"Beauty is the whole of life,  
The fairest lives the best.  
The sweetest note of music  
The soonest lulls to rest."*

"You see," she explained, "the first verse was the hardest. I thought for years about it." Then she resumed.

*"I thought that here's a venture,  
To roam the wide world 'round,*

*To search in distant places  
Where beauty might be found."*

"I was just like that," she said. "On the go all the time. My man would bring home every kind of flower or rock he thought was pretty. I just had to see it."

*"I saw the craggy mountains,  
The laughing streams that flow,  
The rosy flush of morning  
And evening's dying glow."*

"That sounds a little silly," she explained, "but I couldn't find any other words."

*"I saw a fairy mountain  
Beside a castle old,  
Tossing droplets in the sun  
All diamonds and gold."*

"That seems like something I've heard before. Maybe not. The thought came to me one time when my man and I were in the city and I saw a fountain in front of a big house."

*"And there beside the water  
A maiden young and fair,  
Sweetly smiling face framed  
By dusky braids of hair."*

"Maybe that doesn't seem to fit in but I had to bring life in to fill out the picture," she explained.



*"Sure it is my quest is o'er—  
'Not so,' a sage replied,  
'Thousands just as fair have lived  
And with their beauty died.'"*

She was lost a moment in introspection. "That sounds a little harsh," she mused, "but I couldn't leave out that part of life."

*"Beauty is not in faces,  
Nor in the verdant fen,  
Not in the trees or mountains,  
But in the hearts of men."*

"That's all," she said, "It isn't much, is it? Maybe you don't understand but I've been trying to put down the thought that it isn't the sunset, or the flower or the mountains that's beautiful but it's something that's already in our hearts that turns it into beauty. Can—can you see it as I do?" she asked anxiously.

"Yes, I think I do," I replied humbly. That little poem was a shorthand for her condensation of life, the epitome of desperate effort to wrest all of glory and beauty from a drab existence.

With a start I realized the lateness of the hour. I rose. "Would it be too much for me to make a copy of your verses?"

"Why, no," she replied, happily, I thought. "Take this. I do not need it. I know it by heart."

She came to the car with me and as I opened the door I asked, "Aren't you somewhat afraid out here alone so much of the time?"

"Oh, no," she laughed, a note of mischief in her voice. She opened the knitted reticle, reached in and held her hand before me. From the reflected glow of the head lights I saw on the withered and wrinkled palm one of those old-fashioned .41 caliber, short, snubby, two shot derringers, one barrel below the other, the deadliest short range weapon ever devised. For a second I was shocked, then I realized she had always been face to face with stark reality.

"Come to see me when next you pass this way," she invited and stood while I backed away and straightened out on the faint road. She lifted her hand in farewell and turned to the door.

My lights laid a segment of illumination before me and I saw the mice and desert rabbits, the lizards and horned toads scurrying across the trail. A lone coyote shambled into the light and made an unhurried exit. Overhead flaming Castor and Pollux drifted in eternal companionship across the sky and the great dipper laid against the black vault of heaven. A perfect desert night was extending its benediction to the land, short hours before writhing in torturing heat.

In the careless way men have I never returned to the little shack by the arroyo edge nor did I hear further what befell the little old lady. But I seldom ride along through a desert night without thinking of her.

The population at Yaquitepec, the desert home of Marshal South and his family on Ghost mountain, is growing. Growing youngsters need milk—and Marshal has solved the problem by acquiring a couple of goats. They thrive on the sparse vegetation of this remote desert outpost. This month Marshal gives some new side-lights on the art of primitive living in the land of mescal and juniper.

## Desert Refuge

By MARSHAL SOUTH

VIVID yellow plumes of the tall, blossoming mescals against the morning sun. The silence is lazy with the faint drone of a myriad bees. And before the open windows of Yaquitepec little shoals of tiny insects hang suspended on vibrating wings. In their poised watchfulness and darting movements their likeness to microscopic fish in some clear tropical lagoon, is startling. And why not? We all dwell at the bottom of a mighty air ocean; exactly the same, except for density, as that in which the marine creatures live. How close together the Great Spirit has placed the different planes of Life! And how little we know about even the most obvious of them. The world of the ocean adjoins our own. And what do we really know of its secrets and life conditions? Yet we pretend, many times, an arrogant knowledge of realms much more mysterious.

Tanya and Rider are up the slope gathering mescal fuel. Their voices drift down to me through the still air. And with them the faint, musical clank of goat bells. For Conchita and Juanita, our two four-footed friends, have rambled off with them, following at their heels like pet dogs, cropping a bite here and a mouthful there. Skipping from rock to rock and butting each other playfully.

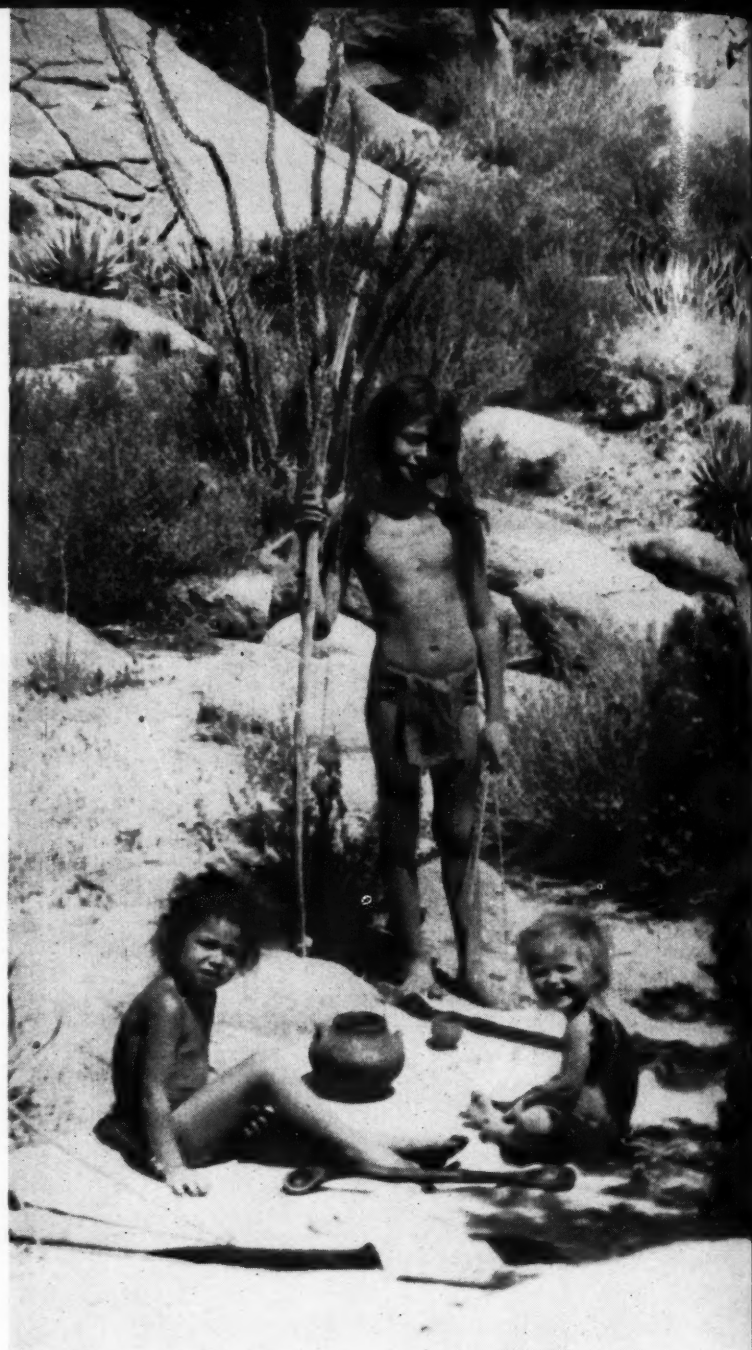
Have I chronicled Conchita and Juanita before? Perhaps not, for it is only recently that they became members of our Ghost mountain population. Already, though, they are a firm part of the picture and their drowsily tinkling bells have brought to Yaquitepec an added flavor of Old Mexico and the colorful lands of sunshine.

Small, active little goats—a Nubian Toggenberg mixture—their brown coats and graceful antelope outlines fit perfectly into our desert landscape. They are popular with our young Yaquitepecos, for more reasons than one. Rider, Rudyard and Victoria now hold milk drinking contests.

I pause a moment to watch the primitive picture which my fuel gatherers and their four-footed attendants make as they come down the rocky face of the northeast ridge. Rider glints lithe and sun-bronzed against the sky. On his shoulders he balances skillfully two dead mescal plants of last season's vintage. With their long poles and attached butts of yellow, bristling dry leaves they seem to completely overshadow their eight-year-old carrier as he steps carefully from foothold to foothold on a trail that is marked—Indian fashion—by occasional guide stones.

Tanya's filled basket is poised high upon her shoulder, steadied with one arm. Her unbound hair waves free in the sunlight as she picks her way through the pattern of purple-grey rocks and blooming buckwheat, pushing aside the emerald green wands of scarlet tipped ocotillos.

And before her, or behind, or on either side, as she moves, range the goats. A pair of little brown antelope, skipping from boulder to boulder. The musical *clink-tonk-tink* of their bells swells louder as they draw nearer the house. Primitive, funda-



*Rider South (standing) with Rudyard and Victoria enjoyed refreshments in the shade of a Ghost mountain juniper.*

mental life in a primitive, fundamental setting! Only the desert, it seems, holds such scenes now. Scenes of a simple life, in a changing tapestry of color, that are both a joy and a despair. One longs to paint them—to catch their color and appeal upon canvas. But the longing is vain. The desert defies you. Even as you reach for a pencil or snatch for your colors the pattern has changed; dissolved and re-arranged and re-blended as the patterns of the drifting clouds and the elusive shadows that fleck the wasteland distances. Well, perhaps it is better thus. This is the stuff of which dreams are woven. And one cannot freeze dreams upon canvas or imprison them in glass containers. For then, instantly, they cease to be dreams.

Fuel gathering these warm days is a minor chore. Something to be done in odd moments; not the imperative "has to be" that drove us during the winter. But nevertheless we often look back regretfully on our roaring winter fires. Not alone from the primitive bond that an evening fire has upon the human heart but also from the cooking angle.

Big fires mean abundant banks of glowing coals. And a plen-



titude of hot coals helps a lot in cookery. Almost every evening, during the cold months, Tanya would take a great iron pot with a close-fitting lid and, having filled it with some sort of varied stew ingredients—jerkey meat and potatoes and onions, or beans and chili and corn, or what not, all generously seasoned with garlic or wild sage—she would rake out the glowing coals of the big fireplace, clear down to the hot, baked-clay paving, and setting the huge pot in the hollow, would cover it completely with coals and banked ashes. In the morning we would rake away the grey, still warm ash banks and lift the iron lid from a cauldron of delectably cooked food; all the component ingredients tender and spicily fragrant with a fragrance which only cookery by wood heat can give.

We have never found a substitute method for this primitive way of cooking—a substitute, that is, which gives anything like the same results. It is only a variation, of course, of the pit oven of the savage or the buried bean pots of our ancestors. But it has a "something" to it. Different ways, and different heat mediums—especially this latter—affect strikingly the flavor of food. And its healthfulness. As he has followed the siren song of his shiny modern gadgets of food preparation up the ladder of ease man has lost something. Perhaps much more than he would believe possible.

Humming birds whirr in the sun. And all over Ghost mountain the strawberry cacti are beginning to yield their harvest of cool, delicious fruit. Rider and Rudyard are busy, most of their spare time, in scouting for them. Their healthy young appetites, plus Victoria's, make heavy inroads on the supply. There never is quite enough to satisfy the demand—which is perhaps why the delicious morsels never lose their popularity.

Pink in color and protected by spines, the fruits, when freed from their savage overcoats, are tempting snow-white or pink-tinted balls of coolness, plentifully speckled with tiny, shiny black seeds. Other residents of Ghost mountain like them too; including the chipmunks and pack rats. Sometimes we wish the pack rats, in particular, were not so crazy about the delicacies. Not that we envy them their just portion of the fruit. But we do object to their thrifty habit of saving every thorn-cluster in the rind and placing it at strategic points either in the vicinity of their own homes—or ours. Very often ours. There are few things more exasperating to step on, with bare feet, than these very efficient little thorn bunches. At the moment one is apt to lose sight of the intelligence the pack rat displays in using this perfectly natural defense against enemies.

Pack rats are remarkable little desert dwellers. They provide a never ending source of diversion as well as an unfailing field for study. We have one old fellow who has chosen to live in a big rough outdoor cupboard in which we store miscellaneous odds and ends. His nest, a big affair, is composed mostly of the cotton padding which he industriously stole from an old automobile cushion. This is his home. But all the aisles and open spaces among the cupboard's contents constitute the "grounds" of his estate.

Periodically—according to the season of the year—he decorates this pleasure park either with tufts of green from juniper branches or with an artistic litter of cholla joints and chewed yucca leaf scraps. In one corner of the cupboard stands an old quart jar without a lid. This is his crystal treasure chest. He is always filling it and emptying it. The costly loot that it contains is composed of everything that strikes his fancy—bits of sun-dried orange peel, small clusters of cholla thorns, sections of chewed yucca leaves, dry juniper berries, bits of sun-whitened bone, bleached twigs, scraps of paper, dried ocotillo blossoms. There seems no end to the variety of hoarded trinkets. When the jar is full he starts, methodically, to unload it. And when it is empty fills it again. Over and over. A serious business; one to which he has evidently dedicated his life.

Undoubtedly he is an "eminent personage" of some sort.

Perhaps a Rajah or a Baron. Or an Antiquarian of note. And if you are going to smile at his antics and his "stupidity" it might be well to remember what some humans do. Even to the hoarding of diamonds and rubies—and other bits of glorified glass.

Not all pack rats however have a "purpose" in life, or take it so seriously. In direct contrast to our collector friend is the one who lives on our roof. He is a gay soul. One who believes, evidently, that life was meant to be tossed away in careless gaiety. A short life and a merry one. He is a cynic. Collect property? Not he! His home is a careless affair of unhandsome sticks tossed together in a sheltered nook where our main roof overhangs that of a small outhouse. He has no pride in it. It is merely a place in which to sleep when he comes reeling home from wild parties. And he is out on a wild party almost every night. He is quite regular and has developed a technique all his own.

When coming home he first climbs to the top of our rock built water cistern. From thence to a jutting beam. From this vantage point, as a springboard, he takes off in a wild leap, landing with a resounding crash in the midst of our sheet iron roof. Sometimes, in tipsy jollity, he is lugging a juniper stick bigger than himself. This adds an artistic note to the "sound effect." Perhaps you think a desert pack rat too small to make much noise. But if you could be jerked from sleep at two o'clock in the morning by the sound of our hilarious friend landing on the roof you would think you were listening to the explosion of a demolition bomb. Almost nightly we swear dire vengeance upon our gay roof tenant. And, as regularly, when the desert morning breaks in peace, we forgive him. After all he is "one of the family." It takes all kinds to make up a world—in the desert as elsewhere.

Warm days and sun. Far, far away the dim, phantom leagues of the lowland desert lie wrapped in a smoke-blue shimmering haze. Upon the horizon bulk the distant outlines of sleeping mountains. The whiptail lizards scoot across the white gravel before the house, nosing, in search of prey, from bush clump to bush clump.

We appreciate the cool water in the drinking olla these days. Also the shade. The children have discovered a way to combine the two. They spread a blanket near some friendly juniper and bring forth from the house an earthen jar of cold water a little flavored with honey or—if it is to be had—a little lemon juice. Then they sit around, Indian fashion, and sip cool drinks from small home made pottery cups, stirring the brew every once in a while with a big wooden spoon. Victoria plays hostess. And very well—if she can be prevented from upsetting the water jar.

Quite ceremonious the youngsters make these tribal drink-fests. Sometimes, watching them, we wonder just what the friendly spirits who lurk in the tree shadows must think of all this—here on their ancient ranging grounds. Ghosts? Oh yes. There are ghosts on Ghost mountain. But that, as Kipling would have said, is another story.

#### SINCERITY

*Better a rag and a meagre bone,  
And a drink from some running stream,  
If you can catch an overtone  
From the distant shores of your dream.*

*For what is fare of a prince's choice,  
Or a money bag or two,  
If you must hush your still small voice  
And live in ways untrue.*

—Tanya South



Scene from "Lady in a Jam," filmed on the Arizona desert near Superstition mountains. Irene Dunne on the left, then Queenie Vassar and Edward McWade. The veteran with the white beard is Mr. Underwood, desert rat who was drafted for a part in the play.

## When Hollywood Comes to the Desert

There's a wide gap between Hollywood and the desert. The movie capital is a city of make-believe. In the desert where Nature reigns supreme there is little pose or pretense. The desert is genuine. But deep beneath the skin humans are about the same everywhere, as you will discover if you read this story of what took place when a troupe of players from the place of pretend-to-be came to the land of things-are-what-they-appear-to-be.

By ETHEL S. CAPPS

ONE day there were strange doings just over the hill from my little shack on the Arizona desert. I first became aware of it when unusual sounds smote the peaceful quiet of the desert morning. The hammering and thumping and pounding were unnatural for this remote place at the base of the Superstition mountains.

When I could restrain my curiosity no longer I walked up to the brow of the hill and peeked over.

There were men and trucks and great loads of building materials. They had invaded my desert domain, and were building a camp.

"Oh, we're putting up a set for Universal pictures," one of the workmen told

me. "There's the boss over there." He nodded his head toward the man who obviously was directing the construction. Later I came to know this man as Jack Tait, ace town-builder-and-wrecker from Hollywood.

The town was taking form rapidly. From somewhere a weather-beaten old shack was coming in on a truck. Others of like appearance were being thrown together with old boards and rusty tin. Soon I was able to recognize main street. An old-fashioned false-front store was being built of brick and glass to resemble a ruin which had long since parted with the rest of the building.

There was one false note—two houses and a saloon were being built of bright

new lumber. But I was yet to learn about the ways of Hollywood. When the new structures were complete, Mr. Tait and his crew of carpenters and painters took sledge-hammers and two-by-fours and proceeded to cave in new walls, smash windows and make a mess of things generally. Then they patched the windows, or boarded them up.

"Aging them," they called it. The final "aging" was done by the painters. They sprayed the buildings a dirty grey, re-touched them with streaks of lighter or darker shades. The hitching rail in front of the saloon had been whittled and carved, and it too was given the weathered appearance by the paint crew.

Sheds were built around an old mine shaft, and a stamp-mill was erected—new at first but soon as ancient and dilapidated in appearance as the rest of the camp.

In two weeks the mine and camp were ready for the show. No one bothered to name the town, but the saloon was called the "Lost Hope."

Then came truckload after truckload of props—furniture, reflectors, spot lights, two great generators to supply electricity, and all the apparatus for a Class A picture. All of it came from Hollywood 500 miles away.

But before the picture could be started the art director, the associate producer, cameraman and others arrived to inspect the set from a photographic standpoint. That window would give a better view of the Superstitions for some interior shot if it were in this wall instead of that one. So





*Above—Edward McWade shows Irene Dunne how to pan gold. The skeptical on-looker is Queenie Vassar.*

*Below—Desert people filled in as extras for the gold rush scene. Superstitions in the background.*



*The author, Ethel Capps, shows Irene Dunne and Patric Knowles how desert people pan gold.*

the window was changed. The ground was too light in places—and they remedied that with the dirty-looking paint. The roadway needed some desert shrubs—and these were added.

Since there were no hotel accommodations large enough for the actors and all their camp-followers, directors, photographers, sound men, make-up artists, publicity men, stand-ins and various technicians, the personnel was to make the trip to Phoenix daily in buses.

The public was to be barred, mainly because of the extreme sensitivity of the microphones for recording sound. Spectators might sneeze at the wrong time. Guards were stationed around the set.

I visited the camp each day, and was invited to remain through the filming of the picture. Perhaps this special privilege was due to the fact that I am a prospector in real life, while Irene Dunne and Queenie Vassar were to be cast as woman-prospectors in the picture.

The first morning on the set was rather strange for all of us. Many of the picture people had not met before, and few of them were in a setting entirely natural to them.

The associate director, Dave Todd, wanted me to meet Queenie Vassar. "Per-

haps you can give Miss Vassar some pointers on mining," he suggested.

But that fine old actress, who was to play the part of grandmother, was more interested in information about coyotes, rattlesnakes and scorpions. A player all her life, she had lived mostly in the cities, and was somewhat concerned about the "wildlife" she might encounter out here on the Arizona desert.

The big fellow in the cowboy outfit who looked like a dude-wrangler, I learned, was the camera man, Hal Mohr. The smaller man with the snappy black eyes, wearing a pull-on sweater, who looked like a farmer from down the way, was Gregory La Cava, director and author of the story.

Ralph Bellamy and Patric Knowles were friendly. Bellamy was full of fun, Knowles more quiet. Miss Dunne was quite reserved on the set, but I found her kind and considerate to all those around her. Her part sometimes called for plenty of what my prospector friends call "guts." But she took it all in good grace. One cold windy morning I arrived on the set to find her plastered with mud from the top of her head to her toes. She was supposed to have fallen in the slope of the old mine. As the mud dried between shots an attendant splashed water over her to freshen it. With

a chill wind blowing none of us envied her that experience.

Mr. La Cava and an assistant wrote the story as the picture progressed. No one knew from day to day what would come next. The actors were handed their lines only a few minutes before time to speak them, or merely were told what to say.

"They must be geniuses," I said to one of the party, referring to the writers.

"Yes, and I guess they think the rest of us are geniuses too," he answered with a note of disgust.

I rather think they were at that.

One actor who came from Hollywood to take a minor part said he couldn't learn that many lines in so short a time, and took the next train home. A local man 75 years old, who had never acted in his life, was drafted to take the part. I saw Mr. La Cava hand him his lines in writing and rehearse with him for a moment, then put him in the scene. As a cloud passed over the sun, the cameras were stopped for a brief interval and I saw kindly Edward McWade, veteran player who took the part of lead prospector, take the opportunity to coach Mr. Underwood, the novice, in speaking his lines. Our desert amateur did himself credit.

Perhaps the secret of success in this write-as-you shoot program was in Mr. La



Cava's ability to pack the story with entertainment and human interest. He gathered ideas from watching those about him, particularly the actors, and wrote the dialogues bearing in mind who was to speak them. If a word or line bothered the speaker, he changed it to make it easier.

The extras for the gold rush were recruited from local desert people. The usual parade of old wagons, buggies, surreys and what-have-you had been assembled, and were allotted to those who could drive horses. Several hundred persons were distributed along the roads, trails and open spaces leading to the town and to the mine shaft. Some were in vehicles, others on horseback or on foot with pack burros. On the word "action" they all moved forward from every direction. They advanced toward the mine by stages while the camera men shot from many angles.

It was remarkable how hundreds of people who had never appeared before a movie camera in their lives, and who came here only out of curiosity, adjusted themselves to the work at hand.

Dressed in my work clothes, I was one of the mob, with a little extra part. With my little black and white dog in leash I was to step in front of Mr. Bellamy and ask Miss Dunne for her autograph. Just at the wrong moment my dog tried to dodge between the two players and in the ensuing tangle the leading man tripped and nearly fell.

Picture-making in an outdoor setting calls for much patience. There were days when the whole troupe would arrive early in the day, only to loaf around waiting for a sun that wouldn't shine. Again, just when the sun broke through the clouds after a long wait, and the camera and sound men were ready, a noisy airplane would arrive overhead. By the time the plane was gone, so was the sun.

"In Hollywood," one of the visitors told me, "we send up a balloon to let the flyers know they are to stay away. Then they all come," he added, "and shoot at it."

Scenes were made over time after time because of a slip of the tongue or a forgotten line, or because a stray sound from far or near reached the microphone. It was a rare occasion when the scene was perfect the first time. Mob shots were repeated many times in order that the best sections of the film could be patched together for the final picture.

The film and sound records were sent to Hollywood each day by airmail to be developed. They were back in Phoenix by air the next morning to be projected on the screen in a theater there for inspection as to correct timing of sound and picture, for faulty lighting or other possible defects.

The company expected to be at this desert location between three and four weeks, with more scenes to be taken in Hollywood. Cloudy days and sickness prolonged the time to five weeks, with a series

of shots at the corral still to be taken. These finally were shot at the studio in Hollywood.

While the picture was in progress here it was called "The Sheltered Woman," a name that did not in any way indicate the gay comedy it was. Later I was advised the title had been changed to "Lady in a Jam."

I learned not to envy these movie folks their jobs. Their work is not the cream and roses most people think. They traveled 40 miles to be on location by sun-up. And

there are winter days when even the desert is not a comfortable place to be outdoors. There were no comforts and few conveniences on this location—but they accepted it all as part of the day's work.

After all, I think I'll stick to my prospecting. The wages may not be so high as in Hollywood—but even the biggest hearted director has to be a czar when he is on the job, and I do not fancy the worry and tension that seems necessary in this world of make-believe.

## VICTORY CACTUS

Even the cacti of the desert are conspiring to keep high the morale of America while the march toward inevitable Victory goes on. These veteran barrel cacti (bisnagas) were photographed one mile east of the old Vallecito stage station along the Butterfield route in Southern California. The photograph was taken by W. Ford Lehman, Pacific Beach station, San Diego, California, and sent to the Desert Magazine office.



Helen Pratt's hobby is tanning rattlesnakes' skins. And since it is necessary to catch the snake before curing his hide, it is needless to say that hobby is not overcrowded. Here is Mrs. Pratt's story of the formula she has developed, both for hunting the snakes and treating the skins to make them soft and pliable for use.

## Rattlesnake Skins are My Hobby



*After nailing the skin on a board, scrape off the fatty tissue, taking care not to damage the skin.*



*From the vertebra of the rattlesnakes Helen Pratt makes necklaces which find a ready market.*

By HELEN PRATT

AS FAR back as I can remember, lizards, snakes and bugs held a strange fascination for me. I had no fear of them, only a desire to study their habits. My childhood was spent in Texas. Rattlesnakes were plentiful there, and that is where the tanning of their skins became my hobby.

The war between human beings and snakes is a one-sided affair. There are more snakes killed by men, than men killed by snakes. The rattler is a pretty good sportsman—a sportsman at a great disadvantage. He seldom fails to give a warning. It is unfortunate that he is unable to distinguish friend from foe. There are many humans who would prefer to leave the rattler go his way undisturbed. But since, in his ignorance of human nature, he has been known to strike the innocent as well as the guilty, he has made himself an outlaw, to be killed at sight.

Both care and caution are necessary in securing a good snake skin. Rattlers are alert and bold. They do no hysterical striking. They wait for the right moment and then with lightning swiftness, lunge out with all their power.

If surprised in an outstretched position, the snake throws its





*Here are the tools of the hunt—a forked stick and a pole with a knife blade on the end of it.*

body into a symmetrical coil, doubling its neck in an S-shaped loop, with head drawn back within the circle of its body, the striking distance approximately half of its length.

Other venomous snakes such as sidewinders, copperheads and moccasins will strike from any position, often aiming blows while on the move. A rattler invariably coils before striking. It is so sensitive to vibration that a foot-step often will cause it to coil and buzz, even when it cannot see the trespasser.

To me, there is symmetry and beauty in the markings of a rattlesnake's skin, and the fact that there are two poisonous fangs always on guard does not weaken my desire to obtain the skin. The coloration varies with different localities. The shade and damp earth of timberlands produce stronger blacks and yellows. The contrasts are not so vivid on the desert, but the pattern is no less artistic.

Here on Baldy mesa on the edge of the Mojave desert of California the markings are of a greenish grey with dark grey diamonds. The mountain timber rattlers have black diamonds, and the desert rattlers are light sand color with brown diamonds.

JULY, 1942



*With these tools it is easy—just pin the rattler's head to the ground and then snip it off.*

My home is Wagon Wheel ranch near Victorville. We have seen only one sidewinder on the ranch, but other snakes such as king, gopher, red racer and rattler are rather plentiful. I hunt only for the rattlers—and find it exciting sport.

Hunting is best on a partly cloudy day, with little breeze. I seek a rocky location as the snake prefers shade. It cannot stand direct exposure of the sun on the super-heated sand in mid-summer. At that time of the year 15 minutes to a half hour in the sun's rays will kill them.

The weapons of the hunt are simple. A forked stick about four feet long is used to pin the snake's head to the ground. A second stick with a knife blade firmly attached to the end quickly snips the neck—and the reptile is rendered harmless. A razor blade may be inserted in the notch of the forked stick, and the entire operation done with one weapon.

It is a general belief that rattlesnakes travel in pairs. That is true during the mating season in the spring of the year, but they are seldom seen together after that.

Baby rattlesnakes come from eggs—but the eggs are never

25

# Writers of the Desert . . .

ETHEL CAPPS, who wrote this month's story *WHEN HOLLYWOOD COMES TO THE DESERT*, is a prospector with seven gold claims and a little cabin near the base of the Superstition mountains in Arizona.

This is one instance where the story came to the writer. Just as she related it in her narrative, Universal films happened to

(Continued from previous page.)

seen. They are formed, according to Edmund C. Jaeger in *Denizens of the Desert*, within the oviduct of the female and never leave the body. Eventually from two to thirty snakes emerge.

Sidewinders are a night-roving species. They hunt their food under cover of darkness when the rodents of the desert come from their holes and nests and burrows. They are most frequently found in the dunes, but also spend the daylight hours in crevices and under bushes to avoid the sunshine. The average length of a sidewinder is from 15 to 20 inches.

Now for the process of tanning the skins:

The snake should be suspended from the neck for skinning. Start at the top and simply peel the hide downward. A pair of pliers will help.

When the skin has been removed, take a pair of scissors or a sharp knife and slit the under side, full length. The skin is then stretched fairly taut and tacked to a smooth board, inside up. Fatty substance is scraped off with a knife or sharp-edged tool, care being taken not to damage the skin.

Make a solution of one quart salt, one pint alum and one gallon of water. Bring the water to a boil and put it in a container of lead, wood or pottery. Stir in the salt and alum until thoroughly dissolved. When cooled it is ready to use.

Place the skin in this solution for a week, stirring once a day. This toughens the skin and prevents the scales from falling off. At the end of a week it should be rinsed in cold water several times and then replaced on the board to dry.

When thoroughly dry, rub it carefully with pure glycerine until it is saturated. After the application of glycerine, place the skin on the board for a day to help it absorb the glycerine more quickly and uniformly. This will keep it soft and pliable. Then roll it in oiled paper. If it becomes dry repeat the glycerine treatment.

Of course the season of the year has much to do with successful curing of the skin. August and September are the shedding months of a rattlesnake and the skins are in poor condition. They will not respond as readily to the treatment I have outlined, nor do they have the satin lustre of snakes caught in the spring months, or soon after the shedding period.

There may be other methods of getting the same results. However, this is the formula I have worked out after many unsuccessful experiments, and I can recommend it.

From the vertebra of the rattlesnake I often make necklaces. They are odd and attractive—if you like them. I am aware that some people have a chronic aversion to anything connected with a reptile. However, that is a matter of personal taste, and since there are not enough to go around anyway, the rattlesnake necklaces may be reserved for those who fancy them.

Tanning snake skins is very definitely an outdoor hobby—you have to catch 'em before you tan 'em. Perhaps it is not a sport that would appeal to everyone. But it has brought me many hours of enjoyable tramping over the desert terrain—enjoyable because a beautifully patterned rattler is just one of many interesting things to be found on the desert landscape.

select an old mining shaft near her cabin as the location for filming a mining western, and Miss Capps being a very practical miner, was asked to supply some of the properties, and take a minor role in the picture.

Her parents were pioneers in the northwest and she spent her girlhood near Spokane, Washington. Later she taught school, but the pioneer blood was strong in her make-up and so she sought adventure as a prospector.

She has studied photography, has a little darkroom in her cabin where she develops and prints her own pictures, and has sold a number of short articles to photographic magazines. Her pin money comes from novelties made from sun-colored glass she finds in old mining camps. She has never been east of the Rockies.

PHIL K. STEPHENS, whose human interest story about the desert woman who spent 40 years writing her life's philosophy in a poem, is a member of the engineering department of the State of Arizona. He lives at Mesa and his articles have appeared in *Arizona Highways* magazine and newspapers. His columns "Uncle Steve Says" and "As I See the World," have been widely read by Arizonans.

JOHN HILTON spent the early part of June in Monument valley. He and Harry Goulding of the Monument valley trading post promised to get their heads together and work up some special material for *Desert Magazine* readers in that area.

RAND HENDERSON, who left the *Desert Magazine* staff in January to join the marines, has completed his "boot camp" training with a sharpshooter's rating, and is awaiting orders for advanced technical training at a Marine school in Utah.

LON GARRISON, whose *HARD ROCK SHORTY* yarns have the distinction of being the only fiction to appear in *Desert Magazine*, recently has been transferred from the Washington office of the national park service to Crater Lake national park.

Although he resigned from the Indian service and is now living in Whittier where he is employed by one of the oil companies, RICHARD VAN VALKENBERGH promised he would continue to write of his experiences among the Navajo for *Desert Magazine* readers, and his story about Bead Singer, the medicine man, in this issue is in fulfillment of that promise.

A new recruit among *Desert Magazine* writers this month is HELEN PRATT of the Wagon Wheel ranch on the Mojave desert near Victorville. Writing is the latest of many hobbies acquired since her first birthday deep in the heart of Texas thirty-odd years ago.

"My snakeskin hobby," she says, "started several years ago when I had just killed a rattler and decided I wanted a belt and hat-band from the skin. I started experimenting with various formulae for curing the hide, and I have been at it ever since."

Mrs. Pratt has lived in California the last 22 years, much of the time on the desert. She is a wildlife enthusiast, and finds many interesting things in the desert besides snakes. Like most other desert hikers she has become a rockhound, and is secretary of a mineral club. She does art work, and despite her 109 pounds, contributes much to the operation of the ranch, her special duties being the raising of game birds.



# HERE AND THERE... on the Desert

## ARIZONA

### Cowhand Shortage . . .

SAFFORD—This state and especially the southern portion faces a cowhand shortage, reports United States employment service officials. An appeal for experienced ranch and roundup hands has been made. Pay is \$2 a day plus room and board with men to furnish blankets, bed-roll, saddle and bridle.

### Lost Prospector Found . . .

YUMA—After two days of wandering across desert regions near here, Harry Schultz, Whittier, California, truck driver who became lost while on a prospecting trip was found alive and well on Colorado river banks. He was without water for two days. Later he found prunes and corn meal in an abandoned prospector's cabin.

### Irrigation Tunnel Survey . . .

PHOENIX—U. S. bureau of reclamation officials are surveying a route to bring water from Colorado river to Salt River valley which will include construction of 100 to 150 miles of tunnel between upper reaches of Grand Canyon and Verde river in vicinity of Camp Verde.

### Another Desert Town . . .

KINGMAN — Anticipating influx of workers for Davis dam, town of Bullshead is being built two miles below the damsite on Colorado river. Camp will provide all modern living conveniences. Ninety lots have been laid out by L. H. Foster, Oatman engineer. Several rental buildings are to be erected soon. Oatman-Davis dam road has been improved by elimination of grades and curves. Deep water wells have been drilled near townsite.

### 'Hoppers Killed by Poison . . .

WILLCOX—Poison bran bait being distributed by trucks and airplanes is killing three-fourths of rangeland grasshoppers around this community, it is reported. One hundred tons of bait are distributed daily, most of which is dropped from airplanes flying at low altitude. Funds for work were appropriated at recent special Arizona legislature session.

### Early Indians Had Dogs . . .

TUCSON—Ventana cave, scene of many archaeological finds, now has revealed that domestic dogs were owned by southern Arizona Indians between 8,000 and 5,000 years ago, earliest trace yet found on North American continent. Bones identified by late Dr. Glover M. Allen of Museum of Comparative Zoology at Harvard were found in cave's layer of debris tentatively dated at 8,000 years ago. Type of dog was uncertain.

### Davis Dam Bid Told . . .

KINGMAN—Utah Construction company of Ogden, Utah, submitted low bid for construction of Davis dam on Colorado river of \$18,996,392. Davis Dam company, a group of firms, submitted second low bid of \$19,313,434. Ultimate cost of power and irrigation project has been estimated by department of interior at \$41,000,000. Dam will impound 1,600,000 acre-feet of water.

### New Road Through Organ Pipe . . .

SONOYTA—Construction of new road through Pipe Organ Cactus national monu-

ment is underway. Fisher Contracting company of Phoenix began work of paving route leading from Sonoyta on Mexican border to Tucson-Ajo highway 22.8 miles north. Sixteen miles of highway consists of new alignment. Completion date is set for November 2.

### Those Eastern Tenderfeet . . .

KAYENTA — Washington bureaucrats complained when an Indian service employee at Tuba City turned in \$40 expense bill after making business trip across wastes of northern Arizona to Kayenta. When he filed his account he received letter from Washington auditing clerk stating "that while this bill is being approved, no more such expense bills would be allowed. You must take a bus or an electric inter-urban car next time."

University of Arizona conferred honorary degree of "Doctor of Science" upon Earl C. Slipher, astronomer on staff of Lowell Observatory, Flagstaff.

Arizona state fair officials express doubt that a fair will be held this year because of probability that fair grounds will be taken over by military forces.

U. S. senate has voted \$50,000 to construct 25 miles of barbed wire fence along Mexican border west of El Paso, Texas.

James M. Stewart, director of lands, office of Indian affairs, is now general superintendent of Navajo Indian agency at Window Rock.

Famed Apache Lodge at Roosevelt built in 1905 when dam construction started will be razed.

Arizona highway commission has budgeted \$10,504,192 to be spent on highways in this state.

Arizona Pioneers Historical Society museum has received shooting irons and handcuffs with which Sheriff John H. Slaughter brought law and order to roaring Tombstone.

## CALIFORNIA

### Flood Relief Sought . . .

NEEDLES—Lake Havasu is being lowered 22 feet in an effort to relieve flood conditions here. This move was one of two recommended by L. J. Foster, bureau engineer. It is hoped that this increased drop in river grade will cause a scouring effect in silt-choked channels. This will be accomplished by cutting down flow of water from Boulder dam.

### Writes "Death Valley Days" . . .

INDEPENDENCE—As true as the stories told over "Death Valley Days" is the fact that the editor of that radio program is a woman, Mrs. Ruth C. Woodman. She is a graduate of Vassar, and has raised a family in Rye, N. Y. Mrs. Woodman makes annual trips to Death Valley regions. Her method of working is simple. She takes a male guide only as a means of entree into saloons and such places normally prohibited to a woman and when on treks into out-of-the-way camps.

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November, 1937

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## The Desert TRADING POST

Classified advertising in this section costs five cents a word, \$1.00 minimum per issue—actually about 1 1/3 cents per thousand readers.

### LIVESTOCK

**KARAKULS** producers of Persian Lamb fur are easy to raise and adapted to the desert which is their native home. For further information write Addis Kelley, 4637 E. 52 Place, Maywood, California.

**KARAKUL SHEEP**—Blue Ribbon Quality — Recognized as War Industry—Authentic information furnished. James Yoakum, 1128 N. Hill Avenue, Pasadena, California.

### MISCELLANEOUS

12 **BEAUTIFUL** perfect prehistoric Indian Arrowheads, postpaid for a dollar bill. Catalog listing thousands of other relics free. Caddo Trading Post, Glenwood, Arkansas.

### PHOTO FINISHING

6 OR 8 **EXPOSURE ROLL** enlarged to mammoth Rancho size, 25c; or 16 small prints from roll, 25c. **RANCHO PHOTO**, Dept. EM, Ontario, California.

### MAPS

**BLACKBURN MAPS** of Southern California desert region. San Bernardino county 28x42 inches \$1.00; San Diego county 24x28 inches 50c; Riverside county 50c; Imperial county 19x24 inches 50c; Yuma and Gila river valley 17x27 inches 50c. Postpaid. Add 3% sales tax in Calif. **DESERT CRAFTS SHOP**, 636 State St., El Centro, California.

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### Learn Gem Cutting

**THE ART OF GEM CUTTING**, Young. For the amateur gem stone cutter this 1942 edition gives complete technical data on methods used both in commercial and home lapidary in non-technical language. 112 pp., paper bound \$2.00

**JEWELRY, GEM CUTTING AND METAL-CRAFT**, Baxter. A handbook for the student and craftsman. Chapters on metalcraft, jewelry making, gem stone cutting, identification of gem stones and minerals. Photos, drawings, index, 224 pp. \$2.50

**HANDBOOK FOR THE AMATEUR LAPIDARY**, Howard. One of the best guides for the beginner. Good illustration. 140 pp. \$2.00

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636 State St. El Centro, California

### Flood Threat at Blythe . . .

**BLYTHE**—For a 10-day period Colorado river flow past here will be at 30,000-foot flow, bureau of reclamation officials have announced. Under present river bed conditions this is considered flood stage and may create a highway water hazard that could do much damage to crops and river control installations. Lake Havasu level is being lowered in order to make some necessary installations and repairs on control gates at dam, it is declared.

### Famous Rancho Sold . . .

**HEMET**—Rancho Guajome near San Diego, one of "Ramona" story birthplaces, has been sold to Clarence Crow of Los Angeles. New owner expects to replace old ranch house with a modern dwelling. Helen Hunt Jackson made her residence at the ranch for some time while writing her now famous novel.

### Indians Oppose Law . . .

**PALM SPRINGS**—Agua Caliente reservation Indians have acted to prevent passage of law which authorizes Secretary of Interior to lease at his own discretion any tribal or allotted Indian lands for "public, religious, educational or business purposes for periods of not to exceed 25 years." Indians of tribe are also seeking removal of Noel C. Wilson as clerk of Palm Springs office of U. S. Indian field service.

George Clements of Needles killed a three-foot "coon-tail" rattlesnake in his front yard. Mr. Clements' home is located only two blocks from business district. Similar snake was killed in same vicinity several weeks ago, it is reported.

Roy Medby, former editor of The Desert Sun, is now operating two Palm Springs newspapers, The Limelight and The News.

Important links on Four States highway sector in Idaho are being completed, leaving only short sections of road unpaved in that state reports Harlan E. Wells, president of highway association. Other improvements scheduled have been postponed because of war conditions, he added.

### NEVADA

### Song Authors to Live in Nevada . . .

**BATTLE MOUNTAIN**—Don Swander and his wife June Hershey, authors of "Deep in the Heart of Texas," wrote that song in Los Angeles, but now they expect to make their home in Nevada where they plan to use proceeds from royalties to buy ranch land.

### Canaries for Gas Hounds . . .

**WINNEMUCCA**—Mrs. Edna T. Eddy at her ranch home east of here is breeding canaries to detect gas on battlefields. Canaries are most sensitive of all birds for gas detection and are declared to be superior to scientific instruments.

### Dodge Const. Co. Wins Contract . . .

**FALLON**—Humboldt county highway board awarded contract to gravel seven miles of Golconda-Pompernick Valley road to Dodge Construction company. This marks first road-building program instituted under private contractor system for county road construction in Humboldt. Dodge submitted bid of \$4,900.

### Nevada Public Lands Available . . .

**RENO**—Surveyor General Wayne McLeod points out that defense workers now employed in Gabbs Valley near Luning, in Clark county and in other defense areas will do well to bear in mind that land is open in Nevada for entry. Homes could be erected and a livelihood produced on this land, he states.

County Game Warden John Beatty has placed 65,000 Rainbow trout in Humboldt county hatchery near Paradise valley. Fish measure about two inches in length.

### NEW MEXICO

### Pioneer Pow-Wow Director Dies . . .

**GALLUP**—Funeral services were held May 16 for Mike Kirk, director of Flagstaff's first annual all-Indian Pow-Wow. Mike was known as an Indian trader, curio dealer and promoter of Indian entertainments, doing much to popularize Indian arts and crafts. He also originated Inter-Tribal Indian Ceremonial at Gallup in 1922.

### Peyote Widely Used . . .

**SHIPROCK**—Reports that as high as 50 percent of Navajo in some northern areas of Navajo reservation are using peyote were heard at Gallup when Southwest regional conference of National Fellowship of Indian workers was held. Adjoining Utes are also said to be using drug. This is in spite of efforts of control by tribal leaders.

### Indians Weave MacArthur Plaid . . .

**SANTA FE**—Indian weavers of Santa Fe are turning out MacArthur plaid on hand looms. Scotchmen say pattern is authentic plaid of MacArthur branch of great clan Campbell. It's a blending of black and dark green with a bright yellow stripe.

### Tourist Traffic Drops . . .

**ALBUQUERQUE**—Tourist bureau officials report deepest slash of year into highway traffic in April because of car, tire and gasoline shortages. U. S. 66 had an interstate traffic of nearly normal, but all other main highways were down.

### Nusbaum Again at Mesa Verde . . .

**SANTA FE**—Jesse L. Nusbaum, local archaeologist and writer has returned to superintendency of Mesa Verde national park, Colorado. Park service this year faces big job in repairing entrance road damaged by slides. Despite this and decreased tourist travel, registrations at park are ahead of last year.

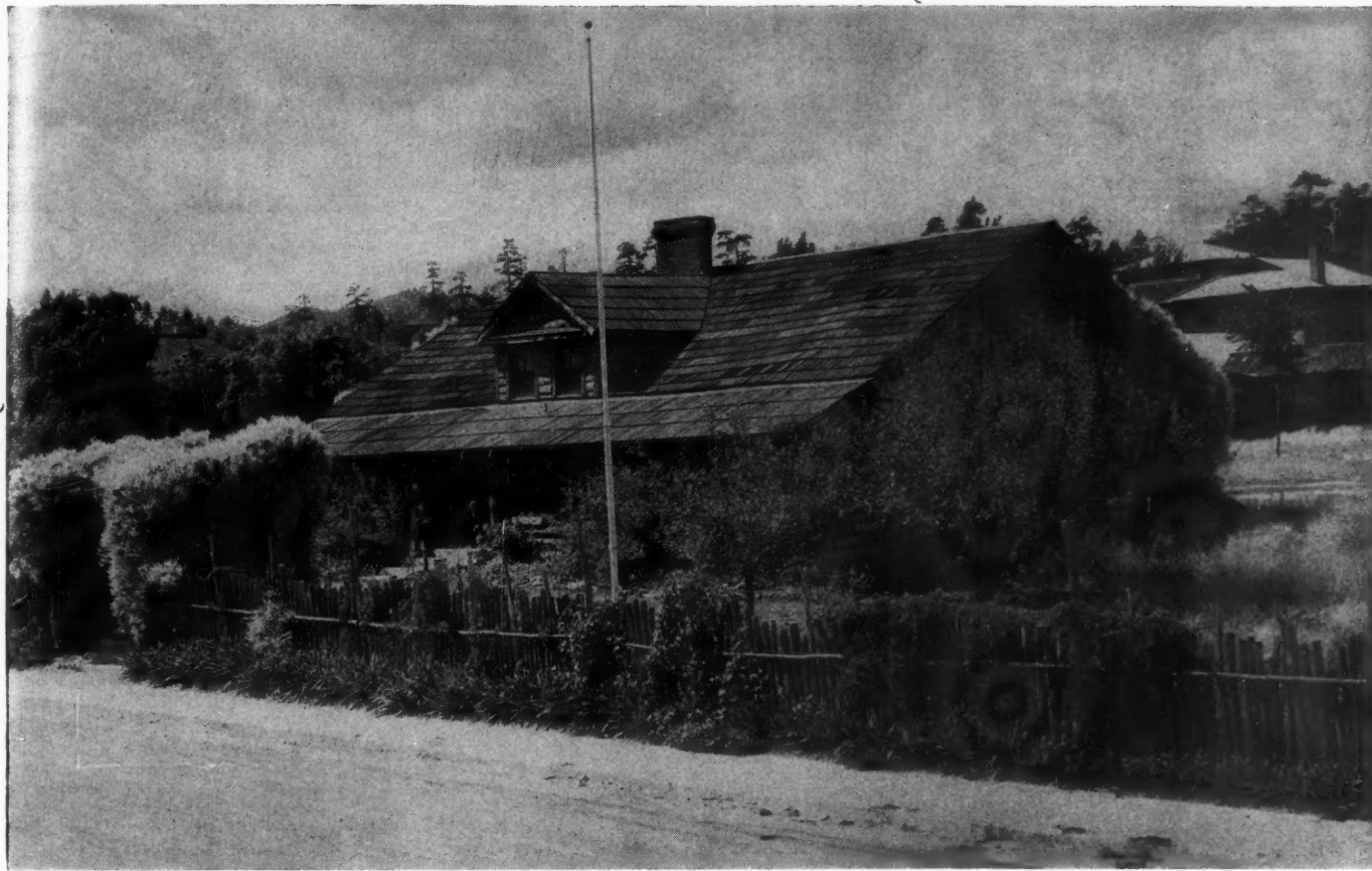
### DESERT QUIZ ANSWERS

Questions on page 15.

- 1—Mountain man.
- 2—Grind seeds.
- 3—Near Ehrenberg.
- 4—New Mexico.
- 5—Superstition mountains.
- 6—Nogales.
- 7—Agave.
- 8—Flasks.
- 9—Old Indian cliff dwelling.
- 10—Four feet.
- 11—San Juan river.
- 12—Magenta.
- 13—At point of discovery.
- 14—Rhyolite.
- 15—Surplus irrigation water from Imperial Irrigation district.
- 16—Apaches.
- 17—Searchlight.
- 18—Reg Manning.
- 19—Salt Lake City.
- 20—Limestone.



## RELIC OF EARLY ARIZONA -- Who can identify this picture?



Thirteen pure-bred bulls have been delivered to Acoma Pueblo Indians boosting community's herd of registered sires to 47 animals.

Fifth annual New Mexico state fair will be held September 27 to October 4, as scheduled announces Leon H. Harms, secretary manager.

Fred Loomas Moss, long-time resident of New Mexico, died at home of his mother in Fort Worth, recently.

### UTAH

#### Utah National Parks Open . . .

CEDAR CITY—Need for recreational facilities becomes increasingly imperative as a result of war conditions, and national parks and national monuments in Utah offer opportunities to assist in filling this need. Bryce Canyon opened May 16. Zion is open throughout year while lodge there opened May 30. Grand Canyon national park lodge opened May 16 and Cedar Breaks national monument was scheduled for opening on June 10.

#### Dewey Dam in War Program . . .

MOAB—Construction of Dewey dam project on Colorado river, about 35 miles above Moab is believed to be included in America's war expansion program. Confidential information received in Grand Junction, Colorado, indicates this fact. Dewey dam site near Cisco, Utah, is considered one of most favored sites on upper Colorado river for development of both power resources and for needed storage of water in upper basin.

#### Children Work Beet Fields . . .

PROVO—Annual job of thinning Utah county's sugar beet crop has started with children from 12 to 16 providing greater portion of labor. Total of 1627 boys and girls have responded to patriotic task.

#### Lawyers Take San Juan River Trip . . .

SALT LAKE CITY—Salt Lake county bar association, wives and guests and members of Southeastern Utah Bar association made a trip down San Juan river from Blanding Bluff through "goosenecks" to Mexican Hat. They were piloted by Norman Nevills, veteran Colorado river explorer.

#### To Explore Yampa Canyon . . .

Preparations were being made during the latter part of May for a scientific expedition through the canyons of the Yampa river in northeastern Utah by a group of archaeologists and naturalists who expect to explore the area more thoroughly than is generally done by river parties. It is believed some of America's most valuable archaeological material is to be found in this area. Included in the party will be Dr. Frank M. Stezler of Smithsonian institution, Dan Beard, Harold M. Ratcliff, Dr. Baldwin and David H. Canfield. Bus Hatch will be in charge of the boats. The start was to be made May 31 at Lily Park.

Dr. J. LeRoy Kay of Carnegie museum is planning to devote several weeks this summer to his annual search for fossil bones in the Uintah basin.

## PRIZE CONTEST ANNOUNCEMENT . . .

To many old-time Arizonans, the above picture will recall the days when Arizona was still a territory, and the capitol was not at Phoenix where it is today.

This old building is one of the best preserved of Arizona's pioneer landmarks, and is today the home of one of the state's most honored citizens.

To the Desert Magazine reader who sends in the correct identification of this picture together with the best description of not over 500 words, a cash prize of \$5.00 will be paid. The story should give the location, brief history, type of construction, and present day use of the building.

To be eligible for the prize, entries should reach the Desert Magazine office not later than July 20, and the winning manuscript will be published in the September issue of the Magazine.

Lions International of District 28 at annual state convention in St. George selected Cedar City for 1943 convention city.

J. C. Hacking of Lapoint was elected president of newly created Utah Colorado River Conservancy association at a meeting of board of directors held recently at Price.

FROM THE . . .

## —DESERT— BOOKSHELF

For your summer vacation which this year you will probably spend at home The Desert Bookshelf carries a wide range of interesting volumes—on Indian lore, mineralogy, exploration, history, legends and culture. Listed below are just a few of these many selections.

For a more complete list write for a catalog now available.

**COLORADO CONQUEST.** David O. Woodbury. Story of the struggle to conquer the river and turn its turbulence into irrigation and power, told in a dramatized, documented form. Illustrated, maps, index, 367 pp. \$3.00

**GOLDEN MIRAGES.** P. A. Bailey. A grand collection of tales and legends of treasure in the Southwest. Pains-taking research has added interest to these lost mine stories and old prospectors' yarns. Illus., 353 pp. \$3.50

**GRAND CANYON COUNTRY.** Tillotson and Taylor. Handbook covering geology, wildlife, history and recreation, and including the Havasupai Indian country. 108 pp. \$1.00

**INDIAN TRIBES OF THE SOUTHWEST.** Smith. Chapters on Acoma, Apache, Havasupai, Hualpai, Hopi, Navajo, Rio Grande Pueblo, Salt River, Taos and Zuni tribes. Useful tourist information. 146 pp. \$1.50

**DENIZENS OF THE DESERT.** Jaeger. Story and description of birds and animals of the Southwest desert; study of the environmental forces which have made desert fauna unique. Illus., 299 pp. \$3.00

**A FIELD GUIDE TO WESTERN BIRDS.** Peterson. A richly illustrated guide, using an easy method of field identification. 97 birds in full color. 240 pages. \$2.75

**HANDBOOK OF AMERICAN MOUNTAINEERING.** Henderson. Written and illustrated by mountain climbers for beginners and experts. Pocket size, 150 illus. \$2.75

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THE *Desert* MAGAZINE

El Centro, California

## BOOKS OF YESTERDAY AND TODAY

—a monthly review of the best literature of the desert Southwest, past and present.

### CONFLICT THAT FACES EVERY INDIAN TODAY

Don C. Talayesva, the Sun Chief of Oraibi, Arizona, faced life as a Hopi boy just at the turn of the century when the Indians were confronted by the conflicting cross-currents of two cultures. Inevitably, his loyalties were swayed between the old and the new ways of life. Transplanted from his native Hopi environment at the age of 10, he was trained for 10 more years to be an American citizen and then returned to Hopiland and the ways of his people.

SUN CHIEF is Don C. Talayesva's story as edited by Leo W. Simmons. It covers a span of 50 years during which time he experienced fully the molding impact of the two cultures upon his life. He tells frankly and freely of his experiences in both the Indian's and the White Man's environments, in an account which the editor admits appears a little strange and unreal to him when he himself is away from Don and Hopiland, but which takes on validity when seen at close range.

While the subject of this autobiography was selected from an alien society within a culture greatly contrasted with white man's standards in order to insure an objective viewpoint, and while it has been recorded primarily as a scientific study of personality development, the average reader will, nevertheless, find the resulting tale fascinating.

However, those who are familiar with the Indian way of life and who do not subscribe to the coldly impersonal, detached attitude of the scientist, will find a jarring note in the description of the laboratory methods pursued by the compiler in collecting his data. The pathos of Don's disillusionment when faced with the undeniable fact that the carefully guarded religious ceremonies of the Hopi had been published and exploited by white scientists in years past, secrets, indeed, which he himself turned from reading because he had no right to know them, throws a far more human light on the pages that follow than Dr. Simmons apparently intended.

It is this relentless, microscopic observation of the Indian and what makes him tick, that will repel the sympathetic reader. There is food for thought in Don's observation, "I regretted that I had ever joined the YMCA and decided to set myself against Christianity once and for all. I could see that the old people were right when they insisted that Jesus Christ might do for modern whites in a good climate, but that the Hopi gods had brought success to us in the desert ever since the world began."

Yale University Press, 1942. 460 pp. Illustrations. Introduction, appendixes, index. \$4.25. —Marie Lomas

### GUIDE FOR ADVENTURE IN HIGH MOUNTAINS

Increasing interest in the adventurous sport of mountain climbing has resulted in the publication by the American Alpine club of HANDBOOK OF AMERICAN MOUNTAINEERING, designed as a guide for both the novice and the skilled climber.

The book is written by Kenneth A. Henderson, expert mountaineer with wide experience both in the Alps and the mountains of North America.

It includes chapters on rock terrain, ice and snow terrain, dangers and rescues, camping, cooking, equipment, map reading, use of compass, weather, sledging and photography. The various techniques, all designed to give maxi-

mum security under all kinds of conditions, are illustrated with 150 sketches which give a graphic understanding of every detail from hobnailing a pair of shoes to throwing a diamond hitch.

This is the first complete mountaineering guide to be devoted exclusively to American climbing terrain and conditions.

Houghton Mifflin Company, 1942. Bibliography. Index. 234 pp. \$2.75.

### ACROSS BURNING SAND TO MEXICO CITY

At the end of the Civil war, a "no-surrender" band of Confederate soldiers under General Joe Shelby struggled across the Mexican desert to Mexico City to offer their services to Emperor Maximilian only to meet rebuff through French intrigue.

Around this almost forgotten heart-stirring drama, Paul I. Wellman has written "Angel With Spurs," a novel. Because of the fact that certain characters of the book are historical and because of the fact the theme represents a dying age in American history, the story is well worth reading. Most of the characters are purely fictitious, but throughout Wellman has laid down a picture of the period of flourish in speech and gesture.

J. P. Lippincott Company. New York. 508 pp. \$2.75. —Harry Smith

### GOLDSEEKERS GAVE DEATH VALLEY ITS PLACE ON MAP

"This January morning Death Valley, 140 miles long, is overlapped in a flood of celestial sun-fire, and the larkspur-blue of the heaven above is without a wisp of cloud." Thus is set the stage for Clarence P. Milligan's uniquely styled DEATH VALLEY AND SCOTTY, from the Ward Ritchie press, Los Angeles, in January.

A running soliloquy and imagined interviews present the pageant of Death Valley—stretching back 12 billion years. Although the incomparable natural features of the great sink are of great interest to the author, it is the trail of gold-seeking humans who command his chief attention.

Louis Manly, leader of the Death Valley party of '49, and Death Valley Scotty, inscrutable keeper of the Castle, are the chief characters in this drama of gold in Death Valley. In between are the scores of lesser figures who have added to the history and legends of the Valley. There was Shoshone Johnny, Pahute Indian whose race looked stoically on while the white man dug for gold. There were the "single blanket" prospectors like Shorty Harris, Henry L. "Smitty" Smith, Alexander Herbert Harvey, John Lemoigne, Louis Jacob Breyfogle. Then there were the 20-mule team days, when "white gold" replaced the yellow.

And all of these invaders, Mr. Milligan believes, might have summed up the Valley's character thus: "Death Valley was not revengeful; but there is eternal verity about the desert, and you have to balance your accounts with it in the end. You may rob the desert, but it never takes its eye off you—there is no place to hide from the sun—and frequently you must pay back with your life."

DEATH VALLEY AND SCOTTY is not a factual addition to Death Valley literature, but it is pleasant reading and possesses an imaginative quality which brings to life more effectively than many others the colorful characters of the fabulous valley. 194 pages. \$2.50.

THE DESERT MAGAZINE



# Gems and Minerals

This department of the Desert Magazine is reserved as a clearing house for gem and mineral collectors and their societies. Members of the "rock-hound" fraternity are invited to send in news of their field trips, exhibits, rare finds, or other information which will be of interest to collectors.

—ARTHUR L. EATON, Editor—

## LOS ANGELES LAPIDARY SHOW IS HUGE SUCCESS

More than 5,000 visitors saw the gorgeous array of cut stones exhibited by the Los Angeles Lapidary society in its two-day show May 16 and 17 at the Hollywood Masonic temple, and declared it to be an outstanding exhibit in every way.

According to Leland Quick, president of the society, there were 11,086 items in the displays including cabochons, facet cut gems, slabs and flats, novelties and silver jewelry craft. There were 80 exhibitors, and the guest book showed visitors from Alaska and Africa.

It was strictly an amateur show, but jewelry buyers were there in numbers, and many of the novices had an opportunity to turn professional if they chose to do so.

Suggesting some of the interesting exhibits, there were the thistle and the Russian girl in silver, the dresser set in Howlite, the amethyst geode, the Lincoln head, the hematite crystal in a bean field agate, the clocks, the lighted geodes, the woodpile, the old wheel, the location map, the "rock-cod," Donald Duck, the poppy geode, the dog and rabbit, the pink tiger-eye—in fact it was a most amazing display from every angle.

Following were the prize winners in the various classes:

Slabs and Flats—all varieties and all localities, men only: 1—C. E. Cramer, 2—Milo Tupper, 3—Frank H. Crawford.

Slabs and Flats—California only, men only: 1—Milo Tupper, 2—C. R. Standridge, 3—Louis Goss.

Slabs and Flats—wood only, men only: 1—C. E. Cramer, 2—L. E. Lackie, Jr., 3—Roy L. Cass.

Geodes and Nodules—all localities, men only: 1—Frank H. Crawford, 2—Milo Tupper, 3—Fred J. Rugg.

Cabochons—all varieties, all localities, men only: 1—Dr. H. E. McKibben, 2—Harry Ringwald, 3—Frank A. Bruner.

Cabochons from California—men only: 1—Dr. H. E. McKibben, 2—Raymond B. Yale, 3—Albert Hake.

Faceted stones—all varieties, all localities, men only: 1—Dr. H. E. McKibben, 2—Thomas L. Daniel.

Novelties—all varieties and localities, both sexes: 1—E. F. Montgomery, 2—J. H. McCornack, 3—Albert Hake.

Minerals—all varieties, all localities, both sexes: 1—H. J. Hueckel, 2—Vern Cadieux, 3—C. H. Schrader.

Slabs and Flats—all varieties and localities, ladies only: 1—Belle Rugg, 2—Katherine Goss, 3—Mrs. Allen Tirrell.

Cabochons—all varieties and localities, ladies only: No entries. This would have gone hands down to Jane Hagar who declined to compete because she took the prize last year and generously wanted to leave the field to others this year. This was magnificent sportsmanship and Jane was given a deserved Special Award.

Cabochons from California—ladies only: 1—Mrs. Harold Hueckel.

Silver Jewelry Craft—both sexes: 1—Mr.

and Mrs. K. J. Quane, 2—Susie Kieffer, 3—Isabel Cass.

Cabochons—both sexes (novices only, working less than a year): 1—Audra Ewing, 2—Russell Grube, 3—Gladys Biegert.

Slabs and Flats—both sexes (novices only, working less than a year): 1—Mr. and Mrs. Ray C. Kruger, 2—Mrs. Ted Schroeder, 3—Mr. and Mrs. Loren Mitchell.

Slabs, Flats and Geodes from society field trips—both sexes: 1—Mrs. Ted Schroeder.

Cabochons from society field trips—both sexes: 1—R. W. Mitchell.

Foreign Stones only—both sexes: 1—Leland Quick.

In addition to the regular winners, special awards were given the following: Jane Hagar, C. D. Maples, Mr. and Mrs. C. B. Rosen-

berg, H. L. Monlux, R. L. Cass, M. E. Gainer, R. B. Yale, E. L. Snowberger, Mrs. Frank Crawford, J. H. McCornack and Dr. H. E. McKibben. Judges were Ernest Chapman, Morris Ebersole and J. Scott Lewis.

## Record Output of Tungsten . . .

Walter W. Bradley, California state mineralogist, reports that during 1941 shipments were made in California of high grade, sorted tungsten ore and concentrates of a total of 171,672 units of tungsten or an equivalent of 2,860 tons of 60 percent concentrates, valued at \$4,080,628 at the mine. These shipments came from Inyo, Kern, Fresno, Mono, San Bernardino, Madera, San Diego, and Tulare counties. The 1941 output was the largest ever made in the state, in the amount shipped, with an average value of \$23.77 per unit received by the miner. The 1941 output showed an increase of 64,000 units over that of 1940.

## Infiltration of Silica . . .

There has been much argument recently as to whether silica actually filters through other materials and hardens them. Many distinct minerals seem to show this action. A very good example is shown by African crocidolite, a form of asbestos as soft, naturally, as cotton. When silicified, it changes to seven hardness, and is then known as tiger eye, quartz cat's eye, etc. All of these are beautiful gem stones.

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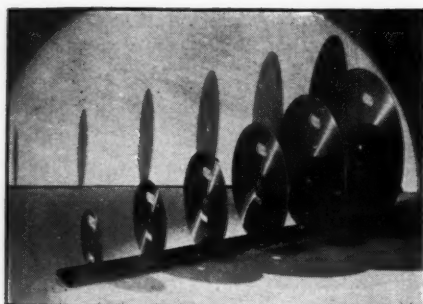


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## AMONG THE ROCK HUNTERS

A peculiar discovery was made recently in cavities of opalized trees near Goldfield, Nevada. The tree have been converted into common opal. In some of the smaller cavities are inky black masses of opal silica about the size and shape of an egg. These are covered almost completely by small, glistening black crystals of quartz. They are interesting specimens, as they leave room for much speculation.

Dr. G. A. Koenig of New York museum of natural history reports the discovery in Canyon Diablo, Arizona, of a small diamond in a meteorite.

Tuition-free courses in the identification of strategic and essential minerals are offered by California Institute of Technology at Pasadena.

In lieu of a field trip San Fernando valley mineral society visited the collection of W. Scott Lewis in Hollywood.

Santa Monica gemological society reports the following officers: Vern Cadieux, president; C. D. Heaton, first vice-president; Clarence Harter, second vice-president; Harry Stein, treasurer; Helen Richmond, secretary; Sadie Sherman, corresponding secretary. The Santa Monica group has raised dues, and decided to charter public buses for long field trips.

Rockhound Record, publication of Mineralogical Society of Arizona, is vacationing till next autumn. The May issue concludes volume 1. The Arizona group plans to hold meetings once a month during the summer. C. E. Young spoke on ores and minerals from the standpoint of the small mine operator at the final May meeting.

Because of curtailed field trips, Los Angeles mineralogical society will continue regular sessions through July and August. Milton Burris talked on why massive and other concrete structures fail at May 2 meeting. The society collected selenite, pectolite in the Los Angeles environs on the May 31 field trip. This club suggests that a building be secured in which all local mineral societies could meet.

"The desert," states Long Beach mineral news, "is getting a bit inclement now. The days are prone to be hot, and you are likely to encounter winds that will lift your toupee and

fill your soup with silica. Very hard on temper and molars." Long Beach members have made recent trips to Lead Pipe Springs and to the Chocolate mountains, securing many excellent specimens.

East Bay mineral society enjoyed a May field trip to Pope valley for Lake county diamonds. Julian Smith discussed crystallography, what it is and its importance in the identification of minerals, at the May 21 meeting. East Bay reports an increasing membership.

W. L. Couzens gave an illustrated talk on aerial surveying and its relations to geology at the May 8 dinner meeting of Pacific mineral society. May field trip was an over night jaunt to Darwin district, Inyo county. Pacific mineral society has a mineral club organizing committee whose purpose is to visit outlying communities and interest them in the organization of mineral societies for the study of mineralogy. Club members donate specimens to be given to the groups contacted.

Mineral notes and news, official publication of California Federation of Mineralogical Societies has added an advertising department. Rockhounds can advertise their wares at a nominal rate. June issue will be printed instead of mimeographed if plans materialize. A subscription price of 50 cents will be charged those who desire to receive the paper through the mail.

J. F. Kaufman, president of Long Beach cactus club showed the Long Beach mineralogists colored movies of Yosemite and of Pearl Harbor. Long Beach mineralogical society was guest of the Cactus Club May 17 at a picnic in Silverado canyon.

Dr. Charles Palache of Hayward, former president of Mineralogical Society of America and member of the National Academy of Sciences, addressed New Jersey mineralogical society, Plainfield, N. J., on the mineralogy of the Mammoth mine of Arizona.

A new mineral species has been discovered by C. D. Woodhouse, president of California Federation of Mineralogical Societies. It will be named Mackayite in honor of John Mackay of Virginia City fame. It is probably an iron tellurate.

Night school students at Kingsley, California, continued their regular class work during public schools week, thus showing visitors how stones are polished and mounted.

Florissant, Colorado, reports fossil roses, butterflies and other insects, as well as sequoia leaves and cones found in miocene shales.

Searles Lake and Imperial Valley clubs were satisfied with their exchange grabs, and are desirous of trading with other societies.

Vincent Morgan of Pacific Coast Borax company demonstrated the method of mineral separation by heavy media at the June meeting of Mojave mineralogical society. The Mojave group states that curtailment of long field trips has not detracted from the interest and enjoyment of these excursions. They visit locations near home. In May they went to Old Dutch Cleanser seismotite mine and the mine of the Calsilco corporation in Last Chance canyon.

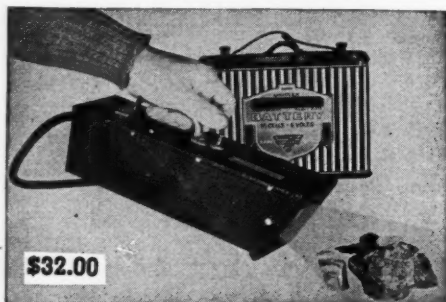
San Diego county, California, produces, in small quantities, a fine grade of micaceous hematite. This mineral comes in small, loose scales, resembling mica in form, but in all other ways a true hematite. It is reddish black in color, and the smaller scales stick to the hands and color them red.

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## Cogitations . . .

### Of a Rockhound

By LOUISE EATON

• Even tho rockhouns is queer animuls, they're consistant. Once rockhouns, alwayz rockhouns, with the deziere to acquire speciments. When they goes visitin', which is seldom nowadays, they tucks in spare rocks to trade with anyone along the route who has material. Trader and tradee is usually satisfied too.

If company cumz to their house, it don't take very long to entice the visitors out to the garage or shop where extra speciments is stored. Uv course, if the visitors is known to be rockhouns, they don't need enticin'. They just nacherally gravitates toward the rocks. But to a rockhoun, displayin' his treasures is the ne plus ultra of bein' a proper host.

• No one appreciates treez more'n desert rockhouns. Shade is scarce on the desert and it's what's not plentiful that's most valued. Besidz that, rockhouns is lovers of the beautiful, an' what could be beautifuller than a wash of palo verdes 'n ironwoods flauntin' their gold 'n purple, or the indigo of smoke trees.

Sixty-five members and friends attended the May first potluck dinner of Oregon agate and mineral society at Portland.

Mojave mineralogical society and mineralogical society of Arizona have exchanged grab bags.

Every rockhound in the armed forces hopes to bring home specimens from far fields and distant places.

C. D. Woodhouse, president of California federation of mineralogical societies, was guest at the annual meeting of Orange Belt mineral society May 17. Ernest Chapman spoke on his mineral trip into Old Mexico.

Sequoia mineral society observed a visiting day, June 7, by viewing collections of several members and an exhibit at Fresno state college. Isabel Westcott, member, gave a talk on formation of crystals at the May meeting of Sequoia mineral society. More and more groups are discovering and developing local talent for their programs, now that it is difficult to obtain speakers from a distance. Frank Dodson gave members specimens of petrified wood from Arizona. A picnic supper completed the day.

Sequoia bulletin says: "We always enjoy the Gems and Minerals department of the Desert Magazine, for through it we receive news of the other societies, and also plenty of good information about strategic minerals, etc. Desert

Magazine is a favorite with most rockhounds." Thanks, Sequoia.

Betty Meisenbach talked on jewelry making at May 20 meeting of Searles Lake gem and mineral society, and Clarence Schlandt spoke on gem stone cutting and polishing. Members having antique or hand made jewelry displayed it. Bill Doyle, editor of Searles Lake mineral news, has resigned. George Pipkin, former editor, has taken over. Secretary Joe Damore has also resigned.

At its meeting June 1 the Los Angeles Lapidary society elected the following officers for the ensuing year: R. DeWitte Hagar, president; Richard W. Mitchell, first vice-president; Harry R. Ringwald, second vice-president; Pearl Robertson, secretary; Thomas Daniel, treasurer; Leland Quick, historian.

East Bay Mineral society of Oakland has selected the following officers for the ensuing year: Julian A. Smith, San Leandro, president; H. C. Mahoney, Oakland, vice-president; Nathalie Forsythe, Berkeley, secretary; George Higson, Oakland, treasurer; F. M. Osborn, Berkeley, and F. W. Cochran and W. C. LaRue of Oakland, directors.

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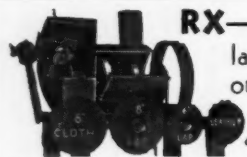
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## SALT LAKE TO BE MECCA FOR COLLECTORS THIS YEAR

The fact that the California Federation of Mineral Societies has cancelled its convention exhibit for 1942 gives added importance to the second annual convention of the Rocky Mountain Federation in Salt Lake City August 29-30. It is expected the Salt Lake show will attract an unusually large number of collectors from the coastal area this year. Utah is a state rich in specimens which are as yet scarcely known to the collecting fraternity.

### Identity of Opalite . . .

Opalite, although not mentioned by Dana, English, or Butler, is a term in common use by many persons. Many prospectors, collectors and dealers use it to designate almost any type of common opal. "Quartz Family Minerals" restricts the name, however, to myrickite, or impure forms of common opal with cinnabar. "Calbenite," a rather beautiful stone offered for exhibit and sale at Barstow last fall, seems to be a variety of this mineral.

### Help From the Rockhounds . . .

Patriotic rockhounds have one very easy and effective way of aiding the national war effort. Uncle Sam needs scrap metals of every known kind, iron, steel, copper, lead, zinc, tin, molybdenum, aluminum, etc. If each rockhound will only gather up and turn over to the government the few pounds of scrap metal at hand such as old auto parts, worn out machines, etc., Uncle Sam will be richer by a total of thousands of tons of valuable metals during this crucial year.

### Visit to Giant Geode . . .

A visit to the giant geode discovered by Richard Fischer and Warren Bush, was one of the highlights in the annual field trip of the Grand Junction, Colorado, mineral society May 30-31. The geode is 7 feet 6 inches in diameter and the inside is lined with nailhead spar of unusual beauty.

The group also visited the Thomas coal mine where giant dinosaur tracks have been uncovered in the workings of the mine. Ed Holt lectured on the geology of the region. Later the members and their guests went to Ladder canyon where muscovite, tourmaline, feldspar and rose quartz are found.

Visitors who accompanied the party included Steven T. Norvill of Evanston, Ills., Chester Howard, president of the Denver Mineralogical society, and Olivia McHugh of Salt Lake City.

## NEWS FOR LAPIDARISTS!

Beginning next month, *Desert Magazine* will carry a regular department for the mineral cutting and polishing fraternity. This department is to be conducted by Leland Quick, past president of the Los Angeles Lapidary society, and will include notes of practical interest to lapidarists, and also a column for questions and answers. *Desert Magazine* staff hopes to make this department both interesting and helpful to those hobbyists who have acquired saws and polishing wheels and are converting their rough stones into beautiful gems.

## HOW MANY OF THIS LIST DO YOU HAVE?

Any mineral collector who wishes to gather a most colorful group of minerals can do so with very little real expense. The following list is merely a suggestion. It is not at all complete, but can be altered and arranged to suit the taste and fancy of even the most particular person. Very expensive specimens have been avoided.

*Green:* malachite, chrysoprase, epidote, jade, kyanite, olivenite, smithsonite, turquoise, variscite, fluorite.

*Red:* agate, carnelian, opal, rhodonite, vanadinite, cuprite, chalcotrichite, garnet, jasper.

*Black:* basanite, obsidian, onyx, opal, jasper.

*Blue:* azurite, chrysocolla, dumortierite, fluorite, kyanite, lapis, turquoise, agate.

*Brown:* andalusite, quartz, gypsum, jasper, agate, onyx.

*Violet to purple:* purpurite, fluorite, lepidolite, dumortierite, amethyst.

*Pink:* feldspar, jasper, rose quartz, halloysite.

*White:* opal, milk quartz, marble, alabaster, albite, chalcedony, halite, amblygonite.

*Yellow to orange:* citrine quartz, amber, jasper, agate, wulfenite, sulphur, orpiment and realgar.

*Colorless:* rock crystal, selenite, calcite, aragonite, fluorite, cryolite, hyalite opal.

## REVISED EDITION OF GEM CUTTING BOOK

Written for both the novice and the advanced lapidarist, Fred S. Young of Portland, Oregon, recently has published a second and revised edition of his book *THE ART OF GEM CUTTING*.

This manual is recognized as one of the most authoritative works available on the subject. Its text includes a wide range of information in addition to detailed instructions for cabochon and facet cutting of gem minerals. There are chapters on equipment, identification, agate coloring, asterism, identification and jewelry making and other kindred subjects.

Published by Mineralogist Publishing company, the book is profusely illustrated. 112 pp. \$2.00.

## Sources of Common Salt . . .

Most of the salt production in California is obtained by evaporation of water of the Pacific ocean. The plants are located on the shores of San Francisco, Monterey, and San Diego bays, and at Long Beach. Additional amounts of salt are derived from lakes and lake beds in the desert regions of Imperial, Kern, San Bernardino and Modoc counties. A small amount of valuable medicinal salts has been obtained by evaporation of the waters of Lake Mono, Mono county, and from a mineral spring in Butte county.



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# Mines and Mining . .

## Washington, D. C. . . .

Owners of unpatented mining claims will not be required to do the annual assessment work during the next two years, under an order signed by President Roosevelt early in May. The order applies to both lode and placers. Men in the military service were exempted by congressional action some time ago, but the present ruling applies to all owners. The moratorium granted by the President is due to the fact that priorities have made it difficult to obtain tools, and also because many small miner owners are now engaged in defense activities.

## Battle Mountain, Nevada . . .

The New Verde Mines company said to be backed by the Newmont Mining corporation is developing a quicksilver property through open pit operations at the Silver Cloud mine 42 miles north of here. Bryan R. Frisbie is superintendent of operations. Several caterpillars have removed overburden from a wide area in excavating. New buildings have been established at the camp.

## Window Rock, Arizona . . .

To locate possible drilling sites for oil, the Standard Oil company of Indiana has sent scouts to the Navajo reservation to trace out petroleum formations. E. D. Johnson, petroleum geologist and Malcolm Brennerman, his associate, have traced structures which they say give promise of production. Observations have been taken chiefly in "the Hogback" region west of Shiprock. A well brought in on the reservation in 1922 by Midwest Refining company still produces.

## Winnemucca, Nevada . . .

Already operating Nevada's leading gold producer, Gatchell Mine company is now becoming an important arsenic producer. Management reports there is a good demand for the mineral at three cents a pound and that 20 tons or more of arsenic will be produced daily when the gold mill is operated exclusively on sulphide ore. Arsenic is needed for war purposes, it is said.

## Tucson, Arizona . . .

U. S. bureau of mines officials announce that an iron deposit on the Apache Indian reservation 10 miles north of Globe has been trenced and sampled. Diamond drilling has started, the results of which will determine if sufficient tonnage exists to warrant private capital mining the field. Apache Indians would receive royalties.

## Denver, Colorado . . .

Jesse Jones, head of the R.F.C. has requested another \$5,000,000,000 appropriation to carry on plans of his bureau to speed up production of strategic metals. Great quantities of equipment must be provided. "We have authorized expenditures in connection with national defense program of something like \$13,000,000,000," he declared. "That is much more than we have funds available to pay for. This includes money for aircraft, magnesium, synthetic rubber, expansion of steel industry, manufacture of ordnance and ships.

## Death Valley, California . . .

Salt pinnacles on the Devil's Golf course of Death Valley national monument will be put to use in defense of America. Basic Magnesium Inc., of Las Vegas has been granted a short-term contract to take the salt needed for use in processing magnesium in its new plant. The deposit lies eight miles south of Furnace Creek Inn. Bulldozers will scrape salt from the deposit which is reported to be on an average depth of eight inches. Geologists estimate that it will take five years of normal precipitation to replace the pinnacles.

## Winnemucca, Nevada . . .

Diatom earth from the United States Diatom Mines company property at Basalt, Nevada, is being shipped to Ford Motors and lend-lease authorities in east which in turn ship overseas or wherever needed. Since the war, diatomaceous earth is in great demand reports Stanley A. Baldwin, mine superintendent.

## Berkeley, California . . .

Dr. Merle Randall, professor of chemistry and world-famous authority on physical chemistry at the University of California has devised a control over mercury poisoning, a deadly peril to quicksilver miners. The control method already in use in some mines is simply the application of a spray of calcium polysulphide to mine walls. This provides a thick coating which cannot be penetrated by mercury vapors. Whenever there is blasting, newly exposed areas must be given a coating.

## Goldfield, Nevada . . .

Riches await the finders of abandoned mines in the Southwest, declare old-time residents. In Arizona, George Simmons, riding through the Crescent mountains saw a small artificial mound. When he examined the find, it revealed the hidden shaft of a turquoise mine worked long ago by Indians and then concealed from encroaching white men. In 1916 a mine was discovered near Ajo, Arizona, which had been worked long ago. There was a very large ledge of gold, showing free gold for 3,000 feet. Examination of this property revealed considerable high-grade ore.

## Unknown Thundergod



## of the Colorado . . .

Summer vacation time is approaching. Would you enjoy exploring the Grand Canyon Country?

Come travel by cataract boat down the Colorado river from Lee's Ferry to Boulder Dam.

RESERVE YOUR PASSAGE AS A MEMBER OF THE NEVILLS EXPEDITION, 1942. (Nevills fourth journey)

Leave Lee's Ferry, Arizona, July 15, 1942. Arrive Boulder City, Nevada, August 3-6, 1942.

Come as a color photographer, geologist, botanist, or just good old vacationist.

Total cost \$1500 per person. Bring your tooth brush and your personals only.

Mail your deposit to Nevills to reserve a seat. No more than six seats available.

Investigate Now!

HARRY L. ALESON

P. O. Box 311 Boulder City, Nevada

NORMAN D. NEVILLS, (Leader)

Mexican Hat Lodge, P. O. Bluff, Utah

Center of the Scenic  
MOJAVE EMPIRE

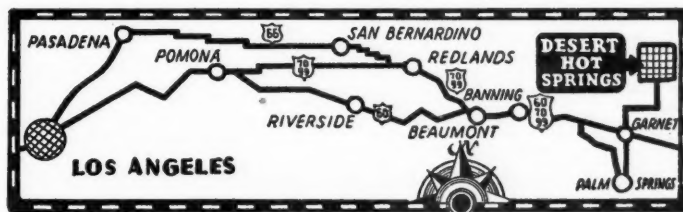
**BARSTOW**

... California ...

## DESERT HOT SPRINGS 10 1/2 MILES NORTHEAST OF PALM SPRINGS

### THE LARGEST BEST EQUIPPED NATURAL HOT MINERAL WATER BATH HOUSE ON THE DESERT

is open to the public every day, under scientific management . . .  
Ladies' and Men's Departments



RESIDENTIAL LOTS 50x130 FEET PRICED AT \$250.00 UP

Terms: 10% Cash — Balance in 36 Months

See our Mr. Todd or Mr. Duncan on the ground

**L. W. COFFEE, Subdivider**

257 South Spring Street

Los Angeles, California

A private  
warm water  
swimming  
pool.

Guest cards  
on request.

# LETTERS...

## To Keep the Records Straight . . .

Westend, California

Dear Mr. Henderson:

With reference to the article in your May issue by John Hilton, entitled "Opal Hunters in Last Chance Canyon," I was disappointed to notice a very grave error. He states that scheelite is tungsten carbonate. This not only is a wrong formula for scheelite, but as far as I am able to find out in the literature at my command, no such chemical compound exists. The correct formula for scheelite is calcium tungstate.

RALPH E. MERRILL

## Dry Lake in Nevada . . .

Berkeley, California

Gentlemen:

Your article on Dale lake in the June issue was very interesting. It reminded me of one of my own experiences in the early days.

In 1907 when the Western Pacific railroad was being built I had a job with an engineering outfit building a section of this railroad at the southern end of Pyramid lake near the Black Rock desert in Nevada.

At that time this was the most forsaken country I had ever seen. After a three-day trip on a

freight wagon from Reno just at sunset we came to our night camp at the edge of what appeared to be a huge lake. I asked the driver to stop and allow me to guess whether or not there was water in it.

After a few minutes of study I decided it was dry—and that proved to be correct. Next day we crossed the lake, 10 miles in length. As it was soft in the center and a wagon might be lost, we skirted the edge.

Later I was with a party which had the job of testing the lakebed to see if it would support a railroad track on driven piles. With a diamond drill we would go down 30 feet. We brought up all kinds of earth, and at 30 feet were in mud. The drill core was of many colors, grey, black, brown, etc., like the layers in a cake.

The entire top of the lake was covered with white alkali which was hard on shoes. It contained many calcium carbonate crystals or "Nevada diamonds."

The skipper of our outfit, a college man, was of the opinion this was the crater of an old volcano. I differed with him, but agreed that the mud in the lake might be volcanic ash. There was quite a discussion of this question, but we finally left the decision to more learned men than ourselves.

I understand the nearest station to this old lakebed is now known as Mullens canyon. It would be an interesting place for those who like to explore the odd places in the desert.

D. A. TYRRELL

## Another Tip for Sand Drivers . . .

Pasadena, California

Dear Sirs:

Enclosed \$5.50 for three subscriptions to Desert Magazine.

In reply to Mr. Clyde Forsythe's letter about getting stuck in the sand. I have another way, much easier. No fault with Mr. Forsythe's sys-



## The Angelus Hotel

Unusually large and airy rooms, furnished with a type, size, and grade of furniture seldom found in modern hotels. Your choice of double or twin beds, all with deluxe inner spring mattresses and box springs, thus guaranteeing the acme of comfort and luxury.

**RATES:** Room with private bath—\$2.00-\$2.50-\$3.00, one or two persons. Without private bath, \$1.50-\$2.00, one or two persons

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Fourth and Spring Streets

LOS ANGELES

A. C. Berghoff, Proprietor—Harry J. Wall, Manager

# IN DEFENSE OF A GREAT LAND

● **WATER** transformed a waste land into a giant agricultural empire producing crops in defense of AMERICA. From soils enriched by nature but made productive by the hand of man and his ingenuity, a great land now fighting for its life finds welcome sustenance. Soldier, defense worker or civilian all depend upon California's granary.

And all of this only because the Colorado river pouring steadily into the Gulf of California was put to work and because this wasted resource was finally brought to more than a half-million acres of parched land by thousands of miles of canal system.

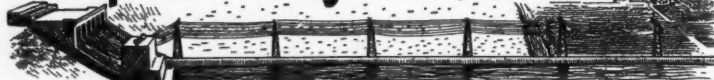
Rockwood visioned the importance that would some day come to this inland country if water could be made available. And so as his dream became reality, the name of Rockwood went down among pioneers of the West. FOR THE IMPERIAL VALLEY POURS OUT AN UNENDING SUPPLY OF FOOD IN DEFENSE OF A GREAT LAND.

● **POWER** for homes and factories of America. Down in the Imperial Valley the cooperatively owned Imperial Irrigation District produces electricity for homes and for industry. Now producing its own energy, the Imperial Valley no longer depends on others for power. Along the All-American canal great electricity-producing plants send current to packing houses, to refrigerating plants, to processing plants and to homes.

Comfort and happiness have been brought to the more than 60,000 residents of the Imperial Valley, because cheap cooperatively produced electricity has been made possible.

TRULY WATER AND POWER FROM THE IMPERIAL IRRIGATION DISTRICT HAVE MADE A NEW EMPIRE INDISPENSABLE IN DEFENSE OF A GREAT LAND.

## Imperial Irrigation District



Use Your Own Power—Make it Pay for the All American Canal



tem. I have known him for 10 years or more. We were neighbors at Big Bear lake. He is a wonderful man.

Now my way of getting out of sand or mud is this: Just put the foot brake on a little, just feather it. You see when the brake is applied both wheels turn, otherwise only one will turn. I have tried it in sand and mud and it sure pulled me out.

I hope this suggestion may be of help. Thanks again for your wonderful magazine.

H. F. LOHMAN

### Those Canyon Swifts . . .

Los Angeles, California

Dear Mr. Henderson:

Naturalists are accustomed to finding misstatements regarding occurrence and habits of animals in newspapers and the cheaper brand of periodicals, but such do not often creep into the Desert Magazine (and I speak as an original subscriber). Therefore, I would like to correct your statement in the article on Havasu canyon that the white-throated swift "so far has defied all efforts of the naturalists to discover where it spends its winters—whether it goes south or into hibernation in the crevices in the cliffs."

The main winter range of this bird is well known to be from central California and southern Arizona south through Mexico, though in the northern part of this region it is less common in winter than in summer. Furthermore, the theory of hibernation of birds, although widely accepted a century ago, has long since been discarded.

G. WILLETT

*Thanks Mr. Willett, I'll pass your information along to a certain naturalist in Grand Canyon national park who was my authority for this statement about the white-throated swift.* —R.H.

### Costumes at Taos . . .

Caliente, Nevada

Dear Sirs:

Referring to the cover on your May issue—the one of the Taos Indian.

Don't you think he is rather well dressed? Did you notice the pants and white shoes showing beneath the blanket? Or am I wrong?

TOM ACKLIN

*Friend Tom: You are right, the Taoseños do wear pants, and those "shoes" are an exquisite pair of buckskin moccasins. In fact the pueblo dwellers at Taos are a very high type of Indian, and while they preserve their traditional robes, these are worn only as an outer garment.* —R.H.

### Fossils in the Cornbelt . . .

Omaha, Nebraska

Gentlemen:

I have tired of borrowing copies of the Desert Magazine from a friend, and as it is not sold at the newsstands here in Omaha, I have enclosed a money order for \$2.50 for one year subscription.

While I have traveled through parts of the Southwest on my vacations, I can not claim to be a real "Rock Hound" although I do own a complete home lapidary outfit.

Very few stones worth while—even those in the gravel deposits or old creek beds—are found here in the "Corn Belt." However we have a wealth of marine fossils in the sedimentary rocks near here.

The deposits are just south of where the Platte river enters the Missouri river.

I understand specimens from these beds are to be found in collections all over the world.

I will be glad to correspond with anyone who might be interested.

DAN H. DUNHAM

### The Music in Man's Soul . . .

Yucca Valley, California

Dear Randall:

William Shakespeare says:

*"The man that hath no music in himself,  
Nor is not moved with concord of sweet  
sounds,*

*Is fit for treasons, stratagems, and spoils."*

So please chalk me up as one who heartily favors the wise philosophies of Marshal South. They are as music in this perturbed, chaotic world.

JUNE LE MERT PAXTON

### In Defense of the Prospector . . .

Julian, California

Dear Sir:

Have been a reader of your magazine for several years and am glad to get one when and if I can.

According to the item in your mining section of the May issue, the federal officials have failed "to find a substitute for prospectors, small developers and small company financiers."

Why look for substitutes? There are quite a few of the old-timers and many younger men who know the desert and mountains, and also minerals. Why not give them a break?

If they could make a living prospecting, I am sure they would be glad to go back to the desert—instead of staying on the scrap heap to which they have been assigned.

When developers and financiers want their mines and minerals served up to them on a silver tray, the prospector has to look elsewhere for a living. If a prospector locates anything he has to give 90 percent to the financiers and developers.

The government is lend-leasing food, supplies and weapons to our allies—in other words, grub-staking them. Why not extend the lend-lease to the prospectors under the supervision of the bureau of mines. There are many properties, known and unknown, which could be brought into production and the shortage of minerals would not be so short.

F. R. MANTZ

P. S.—Excuse writing. Have no typewriter, and wouldn't know how to use the d— thing if I did.—F.R.M.

### We'll Help Protect Them . . .

Dear Sir:

The Los Angeles Audubon society has had its attention directed to an advertisement appearing on page 45 of your last issue, which we greatly fear will have unfortunate results. The advertisement is so worded as practically to invite exploitation of the elephant trees in the Anza State Park, through curiosity to see them "bleed" when injured. You of course know that these trees are extremely rare. How they succeed in maintaining an existence in such arid conditions is one of the marvels of Nature. If to natural difficulties we add deliberate injury, they cannot long survive, and we feel that their peculiar characteristics should not be advertised without a warning to this effect. It was largely because of the existence of these trees in the Anza Desert that our society joined others in contributing to a fund for the preservation of the region as a state park. Are local organizations less interested? Or do you think we are unduly disturbed? We would be glad to have your opinion.

ETHA HOLDEN

*Dear Mrs. Holden: Desert Magazine staff and all true friends of the desert share your interest in the preservation of these unique trees. Fortunately, the Elephant tree has an extremely thick bark and I doubt if serious damage ever will be caused by curious visitors. Another point in their favor is that they are far enough from the highway as to attract only people who have a genuine interest in them—and such folks generally are not destructive. We all want them protected.* —R.H.

### How to Roast Mescal . . .

Fresno, California

Dear Sir:

Charles H. Walker of Willits can get the mescal roast information from Marshal South's diary in the Desert Magazine of December, 1939, page 12.

Long may Marshal and Tanya contribute their philosophy of contentment—it is especially needed in these troubled times.

MYRTLE DOUGHERTY

## Prizes to Amateur Photographers

Each month the Desert Magazine offers cash awards of \$5.00 and \$3.00 for first and second place winners in an amateur photographic contest. The staff also reserves the right to buy any non-winning pictures.

Pictures submitted in the contest are limited to desert subjects, but there is no restriction as to the residence of the photographer. Subjects may include Indian pictures, plant and animal life of the desert, rock formations—in fact everything that belongs essentially to the desert country.

Following are the rules governing the photographic contest:

1—Pictures submitted in the July contest must be received at the Desert Magazine office by July 20.

2—Not more than four prints may be submitted by one person in one month.

3—Winners will be required to furnish either good glossy enlargements or the original negatives if requested.

4—Prints must be in black and white, 3½x5½ or larger, and must be on glossy paper.

Pictures will be returned only when stamped envelopes or photo-mailers are enclosed.

For non-prize-winning pictures accepted for publication \$1.00 will be paid for each print.

Winners of the July contest will be announced and the pictures published in the September number of the magazine. Address all entries to:

Contest Editor, Desert Magazine, El Centro, California.



By RANDALL HENDERSON

† HERE aren't quite as many pages in this issue of *Desert Magazine* as we have been printing during the last year, but the shrinkage is in advertising rather than editorial content. Travel agencies to whom we look mainly for advertising lineage just aren't spending money that way these days.

Fortunately however, this war did not come until *Desert* had reached the stage when we can almost balance the monthly budget with our subscription income—thanks to the loyalty of an ever-growing guild of desert fans.

And so I am glad to assure those many friends who have taken a personal interest in the success of this publishing venture that neither the dictators nor their "new order" have jeopardized the security of *Desert*. Our paper supply is in the warehouse for a year ahead, and I am giving odds that the war will be won by then.

\* \* \*

The combat news is brighter these days. The stepped-up bombing schedule of the R.A.F. has strengthened our faith in ultimate victory. Also, it helped satisfy that desire for revenge which we have felt so deeply. It isn't a commendable trait perhaps—but we cannot lick Hitler without it. And so I hope the good Lord will forgive us for the feeling of exultation we felt when the headlines read "5,000 Germans killed at Cologne."

This war is doing strange things to people. We accept the terrific loss of life without batting an eye, especially when it is on the side of the enemy. Human life seems without value on the battlefield. And yet, paradoxically, here in the United States the concept of human values in comparison with dollar values is making tremendous gains. Witness the utter disregard with which we are spending money for the perpetuation of our democratic freedoms, and as a more specific illustration, the doubling of soldiers' pay with hardly a dissenting vote. The almighty dollar will never be so mighty again—and I am grateful for that. We have had our age of materialism, and it has brought us nothing but grief. I think we are ready now to go on to something finer, something that will bring us riches infinitely more satisfying and permanent than gold.

\* \* \*

Many different versions have been given of Hermann Ehrenberg's death at Dos Palmas spring on the old Bradshaw road in October, 1866, but the story recently told to me by Geo. S. Madden of Los Angeles is probably the most authentic.

Madden once spent six weeks prospecting the California desert with W. W. McCoy, famous government scout for whom the McCoy mountains in Riverside county were named. McCoy

was with Ehrenberg the night of his death, and told the story as follows:

"Ehrenberg and I took the stage at the town of Ehrenberg on the Colorado. We were going to San Bernardino. Our stage driver was Old Hank Brown. We camped the first night at Mule spring, and the next night at Dos Palmas. Brown had an affair with a squaw at Mule spring, and during a quarrel with a jealous Indian had beaten him severely.

"The feud came to a climax that night at Dos Palmas. Brown usually slept in a roofed-over space between two shacks but this night he gave his cot to Ehrenberg. Some time during the night the Indian crept into the camp and stabbed the sleeping man he thought was Brown. When he discovered his mistake he gave himself up and begged to be killed at once so he could join his friend Ehrenberg in the land of the Great Spirit."

\* \* \*

Just so you'll keep in mind that there are other things in this world besides war, here is a paragraph from a letter Mary Beal wrote me from Mitchell's Caverns where she has been botanizing for the past month:

"When I came here the middle of May the hill back of the house was alive with countless Cliff roses, each bush crowded full of creamy little blossoms. And up the canyons the Apache plumes were luxuriant, covered with their pure white petals. There are less flowers this year, but the Incense bushes have been a golden glory and the Paint brush a brilliant scarlet. When I follow the upward trails the *Erigerons* still greet me with little groups of smiling faces."

\* \* \*

I am glad to report that while there may be a dearth of rubber, sugar, copper and some other items, the war apparently has in no way restricted the supply of poetry. The warehouse where I keep the surplus verse is just as crammed as ever. It almost seems that the more shooting there is on the other side of the ocean, the more diligently the verse-writers work at their art on this side. And perhaps that is as it should be. I suspect that if there were more poetry in the souls of men and women there would have been no war in the first place.

\* \* \*

"Beauty is not in faces, nor in the verdant fen. Not in trees or mountains, but in the hearts of men." These lines from Phil Stephens' story in this month's issue of *Desert* keep running through my mind. I have returned to the proofs a dozen times to reread the words of that humble-hearted woman living out there in her desert shack. I do not know her name, but I hope she still lives and that a copy of this *Desert* in some way reaches her. I would feel honored to receive a letter from her.



## OCOTILLO

By LUCIEN M. LEWIS  
San Diego, California

Like a leaning, leaping billow,  
Is the flaming ocotillo,  
In a rolling sea of mist and pearly grey;  
Waving, weaving with a motion  
That gives one the eerie notion  
Of an octopus in waiting for its prey.

Tentacles as tough as battler's,  
Teeth as sharp as fangs of rattlers,  
Anchored with a grip that baffles countless  
blows;  
Weaving, writhing, beck'ning, calling,  
Needled arms fearful, appalling,  
Yet with beauty such as only desert knows.

It can bend like weeping willow,  
This resilient ocotillo,  
While its rawhide sinews withstand storm and  
flood;  
Lovely as a red carnation,  
Yet as tough as all creation,  
There's the essence of the desert in its blood.

## DESERT'S SPELL

By MRS. M. B. HAMPSON  
Hanford, California

I know a realm where giants wrought of old,  
To hew tall monuments from blood-red stone;  
But now the valleys sleep long afternoons,  
Since solitude has claimed them for its own.

Strange purple shadows drift along the slopes  
Of tawny hills, and flooding sunset light  
Dyes pallid peaks with hues fire-opals wear,  
Till painters gaze enraptured on the sight.

But ere you drink the desert's magic draught  
Of beauty, pause a while and ponder well:  
They say you must return to drink again,  
Forever haunted by the desert's spell.

## NOSTALGIA

By MARGARET WEBBER  
Riverside, California

Beside the kitchen window pane,  
Sheltered alike from storm and snow,  
Where water faucets furnish rain,  
Two California Cacti grow.

In earthen pots, the little things  
Push up their spiny stubborn heads,  
Scorning what my protection brings,  
Firm-standing in their sandy beds.

They seek for sun and desert heat  
Where only household warmth is granted,  
And homesick, I their wish repeat,  
For I, like they, have been transplanted.

## FLIGHT OF A HUMMING BIRD

By ANNA PRINCE REDD  
Provo, Utah

A metallic blur, a spinning top,  
Awakes my garden from repose;  
Oh ruby throat, you only stop  
To stir the fragrance of a rose!

## SALT—SALTON SEA

By MARIAN BRUCE YOST  
Indio, California

I sit on the shore and wriggle my toes  
In the warm, in the salty sea.  
I dabble and play the whole desert day,  
While I soak up the sky and the sea.  
Oh, there is no place I would rather be  
Than down on the sand by the Salt—  
Salton Sea!

## Desert Silversmith

By RUNA B. RUHLE  
Claremont, California

The morning air is quivering with sound,  
Responding as the smitten anvil sings  
A chant beneath the rhythmic hammer-swings,  
Until the vibrant echoings rebound  
To where a stalwart Navajo is found  
At work on flattened coins and silver strings  
He fashions into bracelets and rings,  
And carves with creature-folk of sky and ground.

The butterfly proclaims unending life;  
This Gila Monster is a desert sign;  
The cactus bloom brings cheer to lovers' hearts,  
According to the symbol-language rife  
Among this pastoral people, who combine  
The things of nature in their simple arts.

## DESERT PEACE

By ELINOR REES  
Monterey Park, California

When I consider the age-old Joshua trees  
That lift their twisted boughs to sun and stars,  
The weird cacti and grey-green plants like scars  
That mark the desert's face, the tawny bees  
That suck the pale sage blooms, the circling  
frieze  
Of purple hills, and the long, long stretch of  
sand,  
I marvel how plans and dreams that seemed so  
grand  
Can flatten out beneath the power of these.

Not only they, but troubles vanish too;  
The desert has power to cure the soul's disease;  
Her sun can rend the clouds that seemed so  
dark;  
In scattered shreds they fade into the blue  
Of endless sky. Health-bringing is the breeze  
That, warm and pungent, blows from a land so  
stark.

## I'LL NOT ENVY YOU

By WILLIAM CARUTHERS  
Ontario, California

A road across a desert flat. A wind that whips  
the brush.  
A peak ahead that lifts above a canyon's eerie  
hush;  
A skillet in my gunny sack; perhaps an extra  
pan.  
I'll sing along a happy road, as rich as any man.

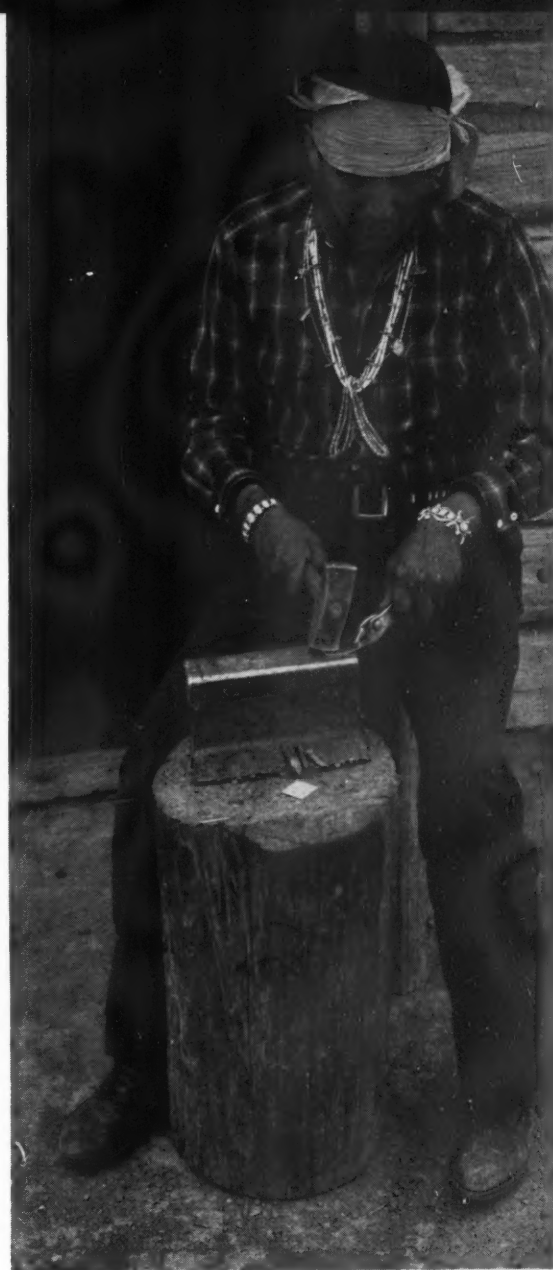
I'll leave to you the cluttered roads that lead to  
raucous towns  
Where playful antics camouflage the aches of  
beaten clowns.  
And you may dine Lucullus-like in orchid-  
scented halls  
With persiflage and revelry and phony water-  
falls.

I'll make my camp when shadows fall, beneath  
a scrub mesquite.  
I'll have no chains to drag along a writhing city  
street,  
And with the bacon frying while the coffee's in  
the brew  
And wood smoke scents my canyon . . .  
I'll not envy you.

## DESERT CREED

By JUNE LE MERT PAXTON  
Yucca Valley, California

The dust-devil goes with a dance and a  
whirl,  
Living a life that is free;  
He hugs the bushes then waves them  
goodbye—  
A capricious old creature is he.



Photograph courtesy New Mexico State  
Tourist Bureau.

## HAIL DESERT DOCTOR

By MARGARET HAWLEY  
Tucson, Arizona

We bring our ills, we bring our woes,  
We don your sun-kiss, don your clothes—  
Foreign to us at first—and then,  
In time "we dudes" forget just when  
Such raiment as "Levi's" and boots  
Were unfamiliar to our roots.

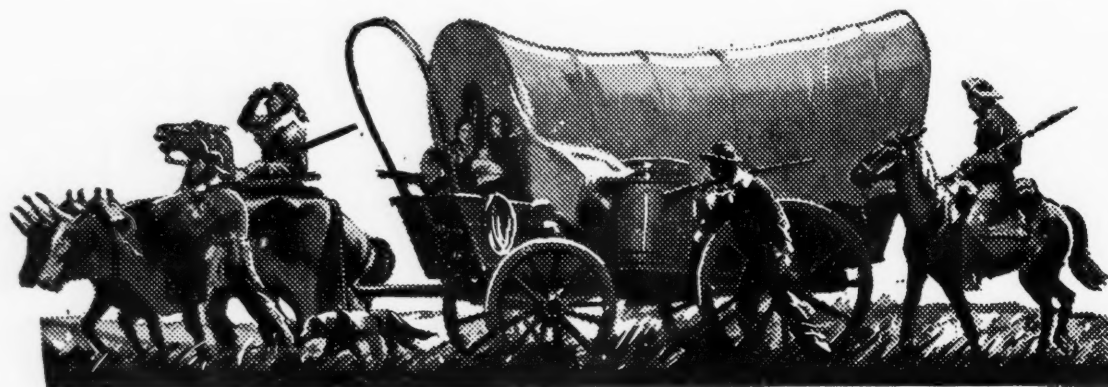
The natives say "it grows on you,"  
We find ourselves soon quoting too;  
The ocotillo's flaming sword  
Has smote us of our own accord;  
And so mañana never comes  
When we'll return to hums and drums.

"Our desert," it must needs be now,  
Possessively, we take a bow—  
As though we played important part  
In branding her into your heart;  
Once captivated, we remain  
To laud her curative domain.

## MEASURE OF GROUND

By IRENE BRUCE  
Reno, Nevada

Once a man has learned the desert's pace,  
No measured city square can bring content;  
Nor can the tallest structures men invent  
Secure him like the desert's open space.



## You Can Enjoy the West Without an Automobile . . .

It doesn't always require gasoline and tires to explore and enjoy the hidden charms of the desert Southwest. If restrictions on travel make it impossible to follow the trails that lead to scenic canyons and remote wilderness playgrounds you may still enjoy these things in the quiet of your own home. Books are the answer—books so fascinatingly written that they give you the "feel" of the great outdoors. You will not only en-

joy reading them, but they will enable you to store in your mind a vast fund of information which will add immeasurably to the pleasure of your vacation when the war has been won and you again can travel where and when you will.

Here is a select list of books that deserve a permanent place in every home library:

- 1 **THE DESERT**, John C. Van Dyke. New edition of a classic which has never been equalled for description of the mystery and color of the desert. Seen through the eyes of an artist, a nature lover and science student, the deserts of Southern California, Arizona and Sonora become clothed with a magic form. 257 pp ..... **\$3.00**
- 2 **THE WEST IS STILL WILD**, Harry Carr. Entertaining account of a tour of New Mexico, Arizona and Southern California, by a newspaperman who had an uncanny gift for dipping into the adventurous past and of portraying an array of colorful characters. Includes the Indian Country, Enchanted Mesa, Carlsbad Caverns, Santa Fe and Taos, Boulder Dam and Death Valley. 257 pp ..... **\$2.50**
- 81 **CALIFORNIA DESERT TRAILS**, J. Smeaton Chase. In demand for 20 years as a guide to Colorado desert of California. Rich in legend, history, geology, plant and animal life. Photos, appen., index, 387 pp ..... **\$4.00**
- 3 **CALIFORNIA DESERTS**, Edmund C. Jaeger. Complete information on Colorado and Mojave deserts. Plant and animal life, geography, chapter on aboriginal Indians. Drawings, photos, end-maps. 209 pp ..... **\$2.00**
- 11 **THE JOURNEY OF THE FLAME**, Fierro Blanco. Fascinating historical novel of Lower California, incorporating geography, geology, flora and fauna, ethnology and mythology. End-maps. 295 pp ..... **\$3.00**
- 82 **HERE'S DEATH VALLEY**, C. B. Glasscock. Vivid, sparkling history of Death Valley built around its colorful characters. Rates a top place in annals of the old West. Photos, end-maps, index. 329 pp ..... **\$3.00**

### ON DESERT TRAILS with Everett Ruess

Everett left a comfortable home to follow remote trails in mountain and desert—his camp outfit on burros. He camped with the Navajo, climbed precipitous cliffs to explore ancient ruins, danced with the Hopi, he was cold and hungry and footsore, but it was all a glorious adventure. He saw the humor in every situation and the beauty in every landscape. His letters and other notes, illustrated with halftones and woodcuts, have been compiled in book form. Fascinating to adults, stimulating to youth.

POSTPAID TO YOU \$1.50

- 68 **WYATT EARP: FRONTIER MARSHALL**, Stuart N. Lake. A thrilling account of Frontier days and of a man who out-shot and outthought the bad men of the toughest mining camps and cowtowns of the old Southwest. Biography based on Earp's own narration of his life. Index, 392 pp ..... **\$1.65**
- 89 **PILLARS OF GOLD**, Lucile Selk Edgerton. Authentic, absorbing historical novel about the gold fields of the Colorado river area during the 1860s. "Not since Harold Bell Wright's *Winning of Barbara Worth* has a novelist presented both the glamour and the grim reality of the desert region so accurately." 403 pp ..... **\$2.50**

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